

M. Glouberman

Descartes:
The Probable and
the Certain

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**DESCARTES:
THE PROBABLE AND THE CERTAIN**

by

M. Glouberman

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The book is dedicated to my father, Issie Glouberman, and to the memory of my mother, Shari Goldstein Glouberman.

System of References

To keep footnotes to a minimum, references to classical sources are incorporated into the body of the narrative, normally in the following form. Prior to a slash, '/', the passage quoted is located by means of the finest locational information (chapter, part, etc.) provided in the original work, the work itself being signified, generally, by a short name. After the slash the corresponding pagination in the editions listed below is supplied. (I list only works in languages other than English. The translations in the mentioned editions are used throughout.) The normal form is varied when appropriate, e.g. when a work from which a passage is taken, and/or its location, is noted independently; also, post-slash data are occasionally omitted, and the slash suppressed, where pre-slash data suffice. An 'ibid.' traces back to the nearest corresponding fuller reference.

DESCARTES. Save for dated letters, all references are to *The Philosophical Works of Descartes*, Volumes I and II, translated by E.S. Haldane and G.R.T. Ross (Cambridge: Cambridge University Press, 1931, 1934). It will obviate the need to mention the relevant volume after the slash to state here that all quotations are from the first other than those from the *Objections, Replies, Arguments Drawn up in Geometrical Fashion*, the Letter to Clerselier concerning *Objections* 5, and the Letter to Dinet. In quoting from Descartes' correspondence, I make use of *Descartes: Philosophical Letters*, translated and edited by A. Kenny (Oxford: Clarendon Press, 1970).

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(Indianapolis and New York: Bobbs-Merrill, 1956). *Critique of Judgement*, translated by J.H. Bernard (New York: Hafner Publishing Company, 1972). Other quotations are from *Kant: Selected Pre-Critical Writings*, translated by G.B. Kerferd and D.E. Walford (Manchester: Manchester University Press, 1968).

Introductory Preface

On Interpreting Descartes

A shopper selects 3 apples from the barrel. '3 apples, 4 cents each', says the grocer, 'you owe 15 cents'. While the shopper will immediately react by complaining that he is being bilked, and flatly refuse to pay more than 12 cents, various explanations which justify the requested sum are possible. The total is right if apples actually cost 5 cents apiece. And if a 25 per cent tax applies to produce, again the total is correct.

As with the shopper, so, almost invariably, with the reader of Descartes' texts. Upon initial encounter, dissatisfaction is felt with key items of Cartesian merchandise, e.g. the dualist thesis — minds and bodies are really distinct — on which I will concentrate these prefatory remarks. Typically, Descartes' manifest reasoning is deemed not to justify his conclusion. Consequently, just as the shopper initially refuses to foot the bill, so Descartes' reader, contending that the strongest warranted conclusion falls short of the one for which assent is requested, declares himself an opponent.

Defensive moves are normally made. Along the lines of the first justification of the grocer, the texts may be scrutinised for additional materials which underwrite suitable adjustments to Descartes' stated premises. Alternatively, along the lines of the second justification, additional premises on which Descartes is implicitly relying may be framed. Cartesian sympathisers will then argue that the alterations suffice for reconstructing a position at least as appealing as anything advertised by the competition, while Descartes' detractors will stay on the offensive by insisting that rejecting the additions is a more reasonable course overall than accepting the conclusion.

There is however a further defensive possibility here. Return to the illustrative case. On the assumption that the grocer's arithmetical system is septimal, not decimal — in which event his 10 is our 7 —

then the product of 3 and 4 is indeed 15. Should we make the assumption (and its correctness could be confirmed by observing other transactions) order is restored without need for resort to problematic supplementation. A corresponding assumption in the Cartesian case, while of course altering our understanding of the texts drastically, would also obviate the need for additions of the preceding kinds.

Given a putative discrepancy between reasoning and results, two broad interpretational strategies are in sum available. An interpreter who grants that the discrepancy is genuine is compelled to make defensive moves which involve transcending the manifest content of the texts. But an interpreter might also query the perception of a lack of fit. To be sure, even should the latter course be chosen, it still remains possible that the reasoning will have to be evaluated as flawed. Now however, the negative verdict will take on an entirely different character. It is one thing to accuse a philosopher of failing to establish a conclusion he asserts, or of establishing it only relative to additional and independently problematic premises; it is quite another thing to level the charge that he fails to establish a conclusion which he doesn't aim to make out.

The present view of Descartes is informed by the second interpretational strategy. Since the first strategy holds sway among those who work within my own tradition of Cartesian commentary — the English, analytic, tradition — I shall be showing that these interpreters systematically misrepresent Descartes' position: unwittingly, they lay a charge of the latter kind. When the dust settles Descartes' reasoning remains discrepant with his dualist conclusion. But the actual discrepancy and the one normally imputed aren't the same.

What in the Cartesian case corresponds to the distinction between arithmetics? A distinction between a broadly Aristotelian categorial system and a broadly Platonic one.

A reader who approaches the texts equipped with the following paradigm of a real distinction — the distinction between the particular table before me and the particular chair on which I am seated — won't be able to make correct sense of Descartes' reasoning. The

upcoming feature of the reasoning signals from afar that this Aristotelian paradigm is out of joint with root Cartesian metaphysical tenets.

It is possible according to Descartes to infer the real distinctness of minds and bodies from the fact that the two principal attributes, mentality and extension, have nothing in common: 'when I examine the nature of body I find nothing at all in it that savours of thought' (*Replies* 4/102); 'there is no better proof of the distinctness of two things than if...we find nothing in the one that does not differ from what we find in the other' (*ibid./ibid.*). Compatibly with the numerical distinctness of the table and the chair, there are however more than a few properties simultaneously ascribable to both: both have weight, are coloured, both have shapes, occupy place, and so on. In a broadly Aristotelian frame, in fact, all the properties of items of one type might also belong to the numerically distinct items of another, providing the latter items possess some additional properties; indeed, if the common properties are differently disposed *per genus et differentiam*, couldn't the overlap be reciprocal? The moral is obvious. Real distinctness would never be defined by one of a broadly Aristotelian persuasion so as to preclude shared properties. If — to apply the moral to the case at hand — such a one were to subject 'mental thing' and 'material thing' to the constraint, that might well ensure that no item presented for comment will qualify either as mental or as corporeal. Similarly, the introduction of a distinction between essential and accidental property-possession is unlikely to lend a helping hand here. That the interpreters I oppose are inadequately sensitive to these difficulties illustrates the depth of their own domestic commitment to an Aristotelian conception of things. The conception may be philosophically defensible. But if I am right about the Cartesian situation, it is clear that unless the influence of the commitment is neutralised, it will have an insidious effect in the exegetical frame.

Immediately what I have said about a categorial difference is taken to heart, the following question virtually poses itself. If Descartes' reasoning, definitively reconstituted, doesn't in fact aim at the conclusion that minds and bodies are distinct as per the Aristotelian

paradigm, what influence will the Cartesian dualist thesis have on us, even supposing it to be the irresistible product of that reasoning? Should our home conception of a real distinction differ in root character, or categorially, from the homonymous Cartesian conception, won't the proof of a Cartesian real distinction become effectively severed from the proof of a real distinction for us?

So excellent is the question that our inability to find a direct Cartesian answer might already be regarded as a compelling counter even to the presumptive credibility of my reading, be as may be its local interpretative triumphs. But the omission can be explained. Why does the question strike *us* with such force? It does so because *we* aren't firmly committed to the Cartesian categorial system. Descartes, since he is himself needless to say an avid exponent of that system, plainly would have been less impressed.

The explanation, in this state, doesn't quite do the trick. Descartes, we know, is a fully self-conscious revolutionary — a rather jealous one at that: 'the solution of no one question has ever been given by the aid of the principles of the [non-Cartesian] philosophy' (Letter to Dinet/359). Descartes recognises that he has philosophical opponents in whose minds the question is more than likely to have arisen; so his personal conviction doesn't satisfactorily explain the omission. But this remaining weakness may be repaired by underlining passages like the ones quoted earlier from *Replies* 4. These passages justify attributing to Descartes the belief that the real distinction he defends is stronger than any distinction of the kind homonymously labelled by those opponents. Evidently, a holder of such a belief would have felt no pressure to answer the question directly.

While explaining, consistently with my line of interpretation, why Descartes doesn't address the question directly, the foregoing remarks also indicate that he does supply an answer indirectly. If the belief attributed to Descartes isn't embraced dogmatically, he will subscribe to it consequent upon subscription to more basic views about the relations between Cartesian and non-Cartesian categories. Obviously, the characterisation of these views as 'more basic' implies that the content of the mentioned belief can be deduced (or otherwise

extracted in a philosophically appropriate fashion) from them. It is thus in defending the more basic views that Descartes would in fact be supplying the raw materials for constructing a direct answer.

Where does Descartes work out the more basic views? I have spoken of an Aristotelian categorial system and a Platonic one; Descartes speaks of 'the probable' and 'the certain'. Descartes' treatment of the relations between the systems is therefore constituted by his treatment of the relations between the inadequate or 'probable' conception of things he is attempting to surpass — the 'unclear and indistinct' conception in which he regards all of us as pre-meditatively enmired — and the adequate or 'certain' conception by means of which he proposes to supplant the former — the 'clear and distinct' conception achieved by the Cartesian scientist.

To establish that the various well-known Cartesian distinctions — between the probable and the certain; between the unclear and indistinct, on the one hand, and the clear and distinct, on the other — are genuinely explicable in terms of the distinction between the two categorial systems, constitutes the basic constructive project of the essay.

Reconsider now the belief attributed to Descartes about the relative strengths of the real distinction for which he argues and of a distinction which would be accounted real by a proponent of non-Cartesian categories. It may reasonably be supposed that distinctions made within a single and unified categorial system can be ranked pairwise in strength. Thus, Cartesian real distinctions — *distinctiones realis* — are stronger than modal distinctions — *distinctiones modalis* — and both exceed distinctions of reason — *distinctiones rationis* — in strength. However, because the ranking in the present instance vaults the categorial divide, its intelligibility cannot so readily be granted. By possible analogy, while one man can of course be described as stronger than another, he can scarcely be characterised literally as stronger than any argument or smell. Even if Descartes' reasoning for dualism, which unfolds within the confines of the Cartesian categorial system, is impeccable in its own terms, it cannot therefore be concluded with assurance that the result has the critical implications Descartes thinks it to have for what he stigmatises as the

'inadequate' conception of minds and bodies. Crudely put, Descartes is under an additional obligation to show that the content of the 'inadequate' conception of things can be incorporated without substantive residue into the content of the 'adequate' one; or, exploit another form the distinction takes, to show that what we are 'unclear' about is the same as that which is presented 'clearly' by the Cartesian scientist. A basic critical theme of the essay is that Descartes cannot discharge the obligation here. The analogy of the shopper is importantly disanalogous in this respect. While the septimal system of calculation can be mapped onto the decimal, no comparable mapping of Aristotelian onto Platonic categories is possible. In a favoured formulation of mine: the probable conception of things is *autonomous* of the certain conception; it is no minor variant thereof. One of Descartes' major errors consists in underestimating the yawning chasm separating them.

The claim that Descartes mistakes the relations between a probable and a certain conception suggests that he makes sense of both. But though Descartes' failure to subordinate the probable to the certain isn't the same as, in the event it goes along with, a failure to make sense of the latter. As this implies, there is a negative component of Cartesian thought and a distinct, positive, one, the first comprising Descartes' criticisms of our standard, sense-involving, view of things, the second his account of what an adequate conception includes. These are distinct because the intelligibility of the conceptual content of the criticisms doesn't presuppose the Platonic categorial system's intelligibility, while that of the conceptual content of the account does presuppose this. A third basic project of the essay, complementing the first, is to pick apart the two components, and to show in the process that Descartes' negative results survive his failure on the positive side — remaining analytically viable even today.

Having stated that my disaffection with received analytic commentary goes deep, it is apposite to continue with a few observations on the methods employed to make the case.

It is a triviality about the problem of interpreting a distant philosophical *oeuvre* that it would be rash to assume that the words

used by a philosopher under study have the same meanings as we, several centuries later, unreflectively attach to them, the more rash because we are all acutely aware that the same problem dogs our efforts to understand even our own contemporaries. How very rash it would be in the Cartesian context has been made amply clear by what I have said in criticism of analytic commentary. Under these conditions, it is obviously unwise to begin by directly considering large chunks of text, attempting to reformulate, animated by a latter-day mania for logical rigour, the arguments they contain.

A natural step under these conditions consists in trying to establish, firstly on a syntactic plane, how central terms in the philosopher's lexicon interrelate. Various semantic or conceptual fields may thereby emerge having no echo or counterpart in our unreflective thought and speech. This will be one of my chief modes of treatment — and it lends to the book what I think is a certain distinctive flavour. By collecting small pieces of text — fragments of argument — from across the *corpus*, we shall come to see that the terms 'certainty', 'action', and 'truth', which lack any close linkage in our philosophical lexicon, are intimately intertwined for Descartes. This is a sign of some deeper difference, relevant to the explanation and evaluation of Descartes' arguments; in the event, it will be found to signal that Cartesian categories differ from those which inform our mundane thinking. (I should add here that although analytic interpreters of Descartes serve as my foil, very little will be found in the way of direct engagement with the vast literature they have created. Since, if I am right about the categories, these interpreters mistakenly assume that Cartesian texts are amenable to fairly straight transcription into contemporary terms — and hence that linkages like the one mentioned are conceptually nugatory — direct debate would put the cart before the horse. I do not mean to suggest that there isn't a cart here. But the horse must be treated first.)

In one respect, Descartes' anti-Aristotelianism is no esoteric fact: all of us know that the scientific revolution in which he played a central part subverts a broadly Aristotelian conception of things. It may therefore be complained that I make needlessly heavy weather of the categorial distinction. My response is two-pronged. First, it isn't

so obvious that the non-esoteric fact, which primarily concerns science, carries a clear philosophical message. Second, if the fact is a sufficient sign of the difference, analytic interpreters have in the event shown themselves singularly impervious to its significance.

Another natural step in aid of accurate understanding is to work oneself, so far as possible, into the frame of mind of the principal by probing his relations with other philosophers of the age, who are somewhat less likely to construe his words anachronistically. While I do treat the various *Objections* to Descartes' *Meditations*, and show that they have the implications I have stated, my book is not a fully-armoured piece of scholarship, and I anticipate a kindred complaint against the complexities of the discussion on this score. But the following observation will explain why the effect of the frankly scholarly approach would itself be less than decisive.

Scholars of the historical literature have not failed to note that the Aristotelianism against which Descartes was reacting — usually dubbed 'Peripateticism' — was far from a pure exemplification of the position of the Stagirite. It was, rather, an often eclectic and bastardised version of the Stagirite's stand, filtered through the special preoccupations of its scholastic inheritors. And the same holds true, *mutatis mutandis*, for Platonism. While one does not therefore have to look far to find a scholar stating that the views of the Peripatetics 'were opposed to Cartesian doctrines',¹ the statement is so quickly hedged round with qualifications that no clear contrast remains. Thus, this scholar immediately adds that the opposition was 'in varying degrees and in various ways'. 'So impressive is the variety among them, that classifying them is a complex task'. In fact, we are even told, some among 'the seventeenth century Aristotelians... actually railed against [Aristotle]! In these circumstances, it would in any case be necessary to explain, independently of the historical texts, what the contrast comes to. And it is obvious that even the scholar, in ranging an historical principal under one rather than the other of the Aristotelian and Platonic banners, is relying on an independent

1. L.C. Rosenfield, *From Beast-Machine to Man-Machine* (New York: Octagon Books, 1968), p. 304. Quotations following: *ibid.*, pp. 304-5; *ibid.*, p. 305; *ibid.*, *ibid.*

understanding thereof. So while I do not for a moment deny that the contrast I employ for purpose of interpretation is highly schematised, I believe that only in such a form can it be used to good effect.

Although my treatment is not controlled by a scholarly knowledge of the various figures of the Cartesian era — I restrict myself almost exclusively to Descartes' own major writings, and to the *Objections* — a specific historical slant will nevertheless be increasingly felt as we go along. A decisive impetus to the interpretation I offer is imparted by Kant. While Kant's concerns aren't those of a professional historian of philosophy (though he has claims to have established the discipline), his backwards-directed perception is, I am convinced, far acuter than that of latter-day analysts. As I shall show towards the end, Kant's writings contain the categorial polarity so central to my reading. Since I take my cue from Kant, the discussion of Descartes therefore has a slightly unusual historical cast: it is drawn forward by the Kantian *terminus ad quem* rather than pushed ahead from the scholastic *terminus a quo*.

While I take sharp issue with analytic interpreters of Descartes, I operate for the most part in their terms when it comes to explaining Cartesian views. A good deal stands yet to be learned about contemporary analysis in this way — certainly about its prospects as a tool of historical enquiry; also, perhaps, about its merits as a general method of philosophising. I stated earlier that I would show Descartes' negative thinking to be receptive to analytic defense. The present point, in denigration of analytic methods as applied by the historical investigator, concerns Descartes' positive thinking. I shall illustrate how key elements of that thinking resist satisfactory analytic representation. This is an index of an historical bias in these methods. So I do not believe it to be accidental that Cartesian views are systematically mistaken by analytic discussants. Kant should serve as a tocsin here; it is both mildly paradoxical and highly flattering to Kant that the lesson that might otherwise have been learned from him is completely missed, owing to his magnificent success in converting the field to his way of thinking.² The dominant

2. 'We can only explain what "philosophical thinking about experience" is by

metaphilosophy of our age has a Kantian provenance. Post-Kantian orthodoxy places philosophy in a characteristically oblique relation to science, divesting it of the dictatorial functions attributable to a foundational discipline. But Kant didn't fail to say of his metaphilosophical revolution that it has substantive implications, which he puts by denying to man the possibility of knowledge of 'things in themselves'; nearly enough, knowledge of the only kind that Descartes regards as worthy of the title.

To make full sense of what Kant denies would impugn his metaphilosophy. Arguably, it is one and the same thing to show that the analyst is substantively committed by the very methods he employs and to show his results to be restrictedly valid at best. But this isn't to say that by showing how *Descartes'* positive reasoning resists analytic treatment one shows that there is something significant resistant to it. In consequence of my contention that Descartes doesn't make full sense of *bona fide* scientific knowledge, the negative remarks about analysis can legitimately be viewed as limited to its historical application. The real character of the historical situation (which isn't necessarily a mirror of the general philosophical situation, since other thinkers may do better than our protagonist) can be modelled neatly by calling upon the contrast between a space which is finite and bounded and a space which, though finite, is unbounded. I said a few pages back that Descartes' criticisms of mundane thought can be reconstituted, even defended, independently of his positive views concerning the nature of genuine knowledge. So while, in terms of the model, Descartes consistently writes as if our domestic space is finite because of embedment in a wider space — and so does Kant, though to a large extent for dialectical reasons, or ironically, in employing the contrast between 'appearances' and 'things in themselves' — this isn't essential to the content of

reference to the sort of thing which Kant did' (R. Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1980), p. 150). The 'we' refers to the analytic collective. Since it is very much as one of the Kantian-Aristotelian 'we' that Rorty understands the thematic content of Descartes' texts, his influential thesis about the Cartesian underpinnings of contemporary epistemology needs to be reformed.

Descartes' criticisms. Descartes' negative reasoning amounts, in short, to a charting of the distinctive shape of our domestic space from within, hence without irrevocable commitment to the reality of anything else; although, obviously, the fact that Descartes frames the reasoning here negatively indicates that he himself thinks to be something real outside.

Inevitably, interpretation in whatever mode, *eo ipso* historical interpretation, to the extent that it necessarily transcends mere paraphrase, involves exaggeration. What is it to analyse a text, if not to spread apart the knotted components thereof, the better to display their 'real' interrelations? A double exaggeration will likely be charged against my central thesis. In arguing that the probable and the certain are mutually incommensurate, I sunder the two more sharply than they are sundered by Descartes himself. But like children, a philosopher's theories often move in ways their originator does not anticipate, let alone approve. This, I am convinced, is such a case. It is obvious that, in my view, Cartesianism is not what is offered in the bulk of the critical literature to which I react. Nor, more to the present point, is Cartesianism exactly what Descartes thinks it to be.

I Doubt and Certainty

'Standard' analytic Cartesian commentary (e.g. Anthony Kenny's *Descartes: A Study of His Philosophy*) is vitiated by a failure to recognise that the rejection of sense-based beliefs on the grounds of 'uncertainty' is not intended by Descartes to receive demonstrative support from the sceptical considerations of Meditation 1. It is illustrated how Descartes' argumentation would succumb to elementary criticism if this were the case, and by close examination of the use Descartes makes of the Principle of Doubt — the principle that a belief is rationally unacceptable unless it is 'entirely certain' — it is shown that he does not in fact commit the various blunders commonly charged against him. Similarly, the validity of his argumentation against mundane beliefs is not hostage to question-begging assumptions such as the assumption that science is unified.

1. Rational belief acceptance: sympathy for the *génie*

'I ought...to withhold my assent from matters which are not entirely certain' (Meditation 1/145). The principle of rational belief acceptance informing this counsel — to be referred to henceforth as *the principle of doubt* — incorporates the condition whose satisfaction has in Descartes' view to be assured in order for a subject to secure a rationally impregnable warrant for unqualified assent to a proposition entertained, viz. the condition of entire certainty. (My words are designed to remain poised as between whether the condition is one on propositions themselves, a relational condition on subjects and propositions, or whatever. A choice here must be allowed to emerge from the discussion.) By systematically applying the principle to his normal stock intellectual possessions — by a process of methodical doubt — Descartes' meditator isolates those propositions belief in which is not rationally justified. Prominent in the company are the familiar factual propositions expressing what is learned in the course of experiential contact with the world. Only when these are effectively marked off can the passage to the promised land of Cartesian science — of '*scientia*' — proceed.

We may assume on general exegetical grounds that a philosopher will devote more care to important than to marginal elements of his position. Since the principle of doubt's importance is beyond challenge, a presumption ought therefore to arise in an impartial reader against the accuracy of standard interpretations of the central Cartesian text. On these interpretations, the sceptical argumentation of the first Meditation, represented as bringing the principle to bear directly on propositions comprising the familiar sense-based conception of reality, is reconstituted as a series of mutually supporting, but severally insupportable, invalidities, not a few elementary. The *prima facie* destructive power of these readings, matched on the other side by the improbable lengths to which Descartes' champions are forced to go in order to salvage a modicum of respectability for the conclusions they agree he is drawing, tells against the characterisation, shared by friend and foe, of what Descartes thinks himself to be doing.

Less nebulous reasons exist for dissatisfaction with the well-trodden lines of Cartesian criticism and defense. If, for example, the stated condition of belief acceptance synchronised with our normal conception of the cognitive strategies characteristic of rational doxastic agency, then the remoteness of Descartes' results would render natural the expectation that his reasoning will be flawed. However, the condition embedded in the principle seems jarringly counterintuitive. Descartes seems to have permitted himself to begin by choosing a standard of rationality already disdainful of the normal constraints. But it is surely most unlikely that under these conditions his argumentation could so quickly succumb to the kind of low-level criticism often glibly advanced in introductory courses and designed to instil in the raw student a healthy scepticism about the classical greats. Would a chess master, allowed to remove his opponent's Queen at the start of the game, have to perpetrate a series of grossly illegal moves in order to retain his advantage?

Favouring Descartes with the benefit of these doubts can obviously be no more than the beginning of wisdom. While it is only prudent, even perhaps mandatory, to cast around for a line of interpretation which puts a more attractive face on Descartes' reasoning

for the rational unacceptability of standard, sense-acquired, beliefs, it would be in the nature of wishful thinking to confer the benefit on Descartes merely because of a pious desire for something better. But such a line does exist. Those who proceed in the fashion described, whether critically or defensively, unquestioningly assume that the sceptical materials of Meditation 1 are directly related to the principle of doubt. This is a mistake. To make the assumption (and I am unaware of interpreters who in one form or another avoid doing so) is to perpetuate a fundamental misunderstanding of the argumentation structure of Descartes' masterpiece.

Impressed by the fact that latter-day phenomenologists employ materials similar to those which figure in Descartes' sceptical reasoning — e.g. the difficulties of distinguishing veridical from illusory perceptual states and of distinguishing dreaming from waking experience — a critic might respond that the mistake is mine, and does not consist in assuming the direct link, but in agreeing too readily that Descartes' argumentation is defective, or, what comes to much the same thing, in holding that the only way to defend it is by ferreting out additional materials from between the lines. The familiar assaults on the elementary validity of Descartes' reasoning can be beaten back, the critic maintains, and the assumption of a direct link supported, by reading his words in a frankly phenomenalist spirit.

It cannot be denied that the interpretational accuracy of such a reading seems to be upheld by the fact that phenomenologists exploit sceptical materials similar to those of Meditation 1 in aid of a negative conclusion identical to Descartes', viz. that the commonsense picture of the deliverances of the senses is mistaken. But despite the meritorious intentions of those who take this line, the resulting position is indefensible. The quite stunning disproportion cannot be missed between the positive conclusions of the *Meditations* as a whole and the sceptical content of Meditation 1. Not only do the work's eventual results — part of a realist-rationalist *ensemble* — outrun the conclusions supported on these very sceptical grounds by phenomenologists, but positive Cartesian conclusions are even less reputable from the phenomenologist's idealist-empiricist viewpoint than the

commonsense picture which he takes the sceptical materials to impugn. For that matter, they are I daresay even less reputable, from the viewpoint of contemporary realist-empiricist critics of phenomenism, than phenomenism itself.

Faced with the disproportion, would those who suggest a phenomenalist reading of Descartes' argumentation have any comeback? In an effort to compensate for the disproportion, they might contend that the positive conclusions of the *Meditations* are sustained not only by the sceptical materials which link directly (as they hold) with the method of doubt, but also by Descartes' independent, and in Meditation 1 largely unacknowledged reliance on substantive assumptions about the nature and contents of a properly 'scientific' representation of the world. I agree that failing the impetus of (dogmatic?) supplementation here Descartes could not reach his ultimate terminus in the *Meditations*, with its mind/body abyss, its equation of matter and extension, etc. And the legitimacy of shoring up an interpretation of the position in the work by unearthing latent assumptions can never be in question. But it is evident on even a moment's reflection that the additional assumptions cited by sponsors of the phenomenalist reconstruction are spirited self-disqualifyingly into the present fray. Reasonable standards of exegetical propriety prohibit one who seriously claims to discern a parallel between Descartes' sceptical moves and familiar phenomenalist argumentation from defending the parallel in face of the disproportion by deploying materials which *go against* the parallel. The proper conclusion under these conditions must be precisely the opposite one, viz. that the sceptical argumentation isn't designed by Descartes to play a primary role in challenging the sense-based view of the world. Not that the sceptical argumentation, construed phenomenistically, fails to play such a role. Rather, the way it functions is entirely out of harmony with Descartes' purposes.

The shortcomings of the phenomenalist reconstruction lead me to join in the widespread dissatisfaction with Descartes' sceptical reasoning. Consequent upon agreeing that the reasoning isn't offered in a phenomenalist frame of mind, I see no plausible way to deflect the repeated accusation of its ineffectuality in the context of

Descartes' desire to undermine the standard experiential conception of things. This would however write *finis* to the Cartesian programme — to, more exactly, the contention that the programme is non-dogmatically executed — only if the sceptical argumentation constituted Descartes' basic support for his negative conclusion. But this last I deny.

By conceding that Cartesian *scientia* can be reached only if substantive assumptions are made by Descartes, haven't I thereby agreed that the critical results of Meditation 1 outrun its argumentation? Not at all. Meditation 1 has a predominantly negative slant, its major outcome being that the senses are an improper avenue for gaining knowledge about the world. But it is one thing to impugn the adequacy of sense-based data, quite another to affirm that a purely ratiocinative mode of world-cognition is adequate and ought therefore to supplant the sense-perceptual mode. For my interpretative purposes it is vital to recognise and scrupulously to observe the distinction here.¹ With the distinction in hand, the impending two-part Cartesian defense can be depicted more precisely. First, on the level of strict argument, Descartes' negative critique of sense-based experience is not informed (though it is undoubtedly motivated) by ultimately question-begging assumptions about knowledge and reality. Second, his core case for the negative thesis that sense-based beliefs run afoul of the principle of doubt, and hence are unacceptable to a rational subject, is innocent of the flaws invariably imputed by those who find fault with the sceptical reasoning; innocent, I repeat, because not directly based on the sceptical reasoning, and thus unaffected by those flaws.

1. The distinction induces a correlative distinction between a negative and a positive version of the principle of doubt. Negatively: the rational subject must reject a belief if it is not entirely certain. Positively: only a belief which is entirely certain is rationally acceptable. The negative formulation is preferable for two reasons. Not only does it sensitize us to the possibility that there may be no rationally acceptable beliefs in Descartes' sense, but it also instils a mindfulness of the possibility that his notion of certainty might not be unitary. By (possible) parity of reasoning, an object might be 'not blue' for different reasons, e.g. because it is red or because it is an object of a kind to which colours cannot be ascribed.

Assuming that these claims can be worked out, the question arises whether Descartes' negative evaluation of a sense-perceptual mode of contact with the world, properly understood, is capable of being sustained. The question is simply not addressed by contemporary interpreters. If I am correct, this oversight is an automatic consequence of their improper understanding of the *Meditations*' rhetorical structure. And while it would be very ambitious to answer with an unqualified affirmative, I would maintain, only a bit less ambitiously, that the issue Descartes debates remains at least a live one today. This does not however mean that Cartesianism is viable. For 'Cartesianism' names Descartes' positive theory. And it is precisely where Descartes begins to extract positive implications from his negative thesis that insuperable difficulties beset him.

2. *Where is Descartes' argument?*

The principle of doubt adumbrated at the start of the *Meditations* and the sceptical materials prominently displayed there are not two sides of a single coin presented to put paid to sense-based cognition. Contrary to the view prevalent in the interpretative literature, Descartes does not introduce these materials in order strictly, or as a matter of irresistible logic, to sustain the result that the rational agent is obliged to renounce his sense-acquired beliefs. Accordingly, the palpable ineffectiveness of the sceptical argumentation here does not therefore tell critically against the overall position, since, to repeat, this argumentation is not advanced by Descartes as the effective measure. The sceptical materials are in short *subordinated* to the principle; they do not work the principle out.

A question, the detailed answer to which can only be supplied as the discussion unfolds, is so likely to be raised right now that prudence dictates the provision of at least a stop-gap response. Plainly, the obligation Descartes pins on the rational agent to withhold assent from normal descriptive propositions about the world is a function of the principle of doubt. Suppose it is granted that Descartes does not support this putative consequence of the

principle by deploying the sceptical materials. Relative to the supposition, are we not entitled to expect that he will offer some defense of the claimed uncertainty of these propositions — defense which must be distinct from the materials? But as we peruse the opening paragraphs of the *Meditations* we are hard-pressed to find anything of the kind. Doesn't it follow that the interpretation succeeds in clearing Descartes of the usual criticisms only by stranding him with the unargued assertion that the senses are improper instruments for achieving knowledge? But between the accusation of not arguing at all and the accusation of arguing ineffectively, it's a strange cast of mind that regards a plea of guilty to the former as the more flattering to Descartes, let alone as exegetically superior.

Were the questioner's perception of the text accurate, no real advantage could be chalked up to the interpretation I propose. That perception is however a misperception. In the opening paragraphs of the *Meditations* there are in fact two lines of support for the principle of doubt neither of which makes essential use of the sceptical materials. Locating and charting these lines is a task for later. But having stated that they are there to be seen, I can be a bit more articulate on just how the sceptical materials of the first Meditation are subordinated to the principle.

Descartes' dismissive attitude towards perceptual cognition has as its core a compositionally recessive but doctrinally basic *structural* analysis of a sense-based mode of contact with the world. The sceptical argumentation plays what can therefore aptly be called a *consolidative* role, as distinct from a *demonstrative* one, and is as such subordinate to the principle. The sceptical argumentation does not in other words contribute at all to proving or demonstrating that sense-based cognition is beyond the scientific pale. Rather, as Descartes himself states, it functions to 'prepare my readers' minds' (*Replies* 3/60) for proof or demonstration by undermining the cherished assumptions of the mildly reflective commonsense thinker on their own terms, as well as to satisfy those more philosophical readers who, in the prevailing climate of debate, expect sceptical issues to be raised. The question whether Cartesian doubt is rational — whether the ra-

tional subject is indeed obliged, qua rational, to reject his normal stock of sense-based beliefs — can only be answered correctly by taking account of the *Meditations*' structural strain. Attempts to evaluate the doubt's rationality solely in terms of the sceptical materials either will lead to the conclusion that the Cartesian programme, since it requires that the doubt be rational, succeeds only by begging the question at issue, or else will result, willy-nilly, in a text-distorting overhaul of what Descartes actually says.

Now that I have distinguished between a demonstrative and a non-demonstrative strain in the negative argumentation of the first Meditation, and without denying for a moment that Descartes could have formulated his thoughts more clearly (thereby obviating the present intricacies), I am anxious to avoid being saddled with the exegetically thorny thesis that Descartes' position isn't what it seems; that, to use the language of conspiracy, the *Meditations* works to a hidden agenda. I have already noted that a reader overimpressed by the parallels between the epistemological problems agitated in the first Meditation and the sceptical-cum-phenomenalist preoccupations of mid-century philosophers of perception will almost automatically miss the distinction; will confuse consolidation for demonstration. But this says merely that Descartes' position isn't what it seems in the optic of one who is overimpressed. Only if Descartes himself were so dazzled by the parallels as to equate the two strains would the judgement be warranted that the reality of his view differs from its appearance. Evidently then, it's a question of working our way more deeply into Descartes' domestic frame of thought. Within that frame the relations emerge directly enough to block the charge either that Descartes is purposely disguising his intentions from us or that they are obscure even to him. To the extent that the argumentational structure of Meditation 1 is less clear than it might be, we shall see this to be a function at base of Descartes' failure to isolate his negative thesis from the positive picture of reality at which he is aiming; it isn't due to any irremediable confusion of the two strains.

Before moving past preliminaries, it is worth gesturing towards the abundance of collateral historical evidence which testifies against the interpretation based on the supposed parallels. For instance, while

Descartes enunciates the principle of doubt early in the *Rules* — see Rule 2 in particular — no more than a glancing reference is made here to the kinds of epistemological material present in the first Meditation. Such evidence that the method of doubt is independent of the sceptical data cannot fairly be discredited by insisting that only in the *Meditations*, where these data come into their own, is the method of doubt properly keyed to the metaphysical theses of Descartes' maturity. Anticipatory versions of these theses are there in the *Rules* for all to see. And indeed, if Descartes thought himself capable of reaching his metaphysical results without airing the sceptical problems, doesn't this by itself indicate, contrariwise, that those problems, once introduced, figure in a minor capacity? Since the *Meditations* is no mere paraphrase of the *Rules*, the question is not quite rhetorical, though we may note that when Descartes is pressed on this matter he responds by remarking that he 'felt some disgust in serving up again this stale dish' (*Replies* 2/31), which has some tendency to imply that his really sustaining argumentation is elsewhere to be found. But a similar implication also flows, this time more securely, from the fact that a marginal role is allotted to epistemological scepticism in the *Principles*, that handbook of mature Cartesian metaphysics. After a perfunctory tip of the hat, Descartes races on to a largely self-contained exposition of such substantive views as the duality of mind and body. Finally, by way of extending our reach beyond the confines of the Cartesian *corpus*, it is enlightening to note that while a philosopher like Spinoza approves Descartes' harsh rejection of the senses, *his* critical attitude is detached entirely from the issues of sense-deception, illusion, and dreaming. Examined from a structural viewpoint, Spinoza's assault on the bastion of the senses on behalf of superior brand of cognition — '*scientia intuitiva*' — follows, if anything, lines more clearly discernible in Descartes' *Rules* than in his *Meditations*.

3. *Uncertainty: truth-neutral and truth-involving*

Informally, the principle of doubt is naturally glossed as the principle that a belief should be rejected by a subject if it is uncertain. No less naturally, the sceptical materials of Meditations 1 are informally taken as designed to establish that mundane beliefs about the world are uncertain. Because of the verbal overlap here the impression is easily fostered that the sceptical materials are directly associated with the principle of doubt, comprising Descartes' *reasons* for holding that the rational subject is obliged to suspend his sense-based beliefs. It follows that if the sceptical materials aren't intended by Descartes to stand in such a relation to the principle of doubt, the notion of uncertainty directly connected with them will differ from its principle-linked homonym. Evidently, it is of paramount importance for an interpreter to recognise any equivocity which might affect the term, since considered evaluation of Descartes' challenge to the senses requires precise understanding of what he has in mind when he describes sense-based beliefs as uncertain.

Close examination bears out an hypothesis of equivocity. A distinction has to be made on Descartes' behalf between a *truth-value-involving* sense of 'uncertain' and a different, *truth-value-neutral*, sense. (For short, I will call these senses 'truth-involving' and 'truth-neutral'.) The notion of uncertainty associated with the principle of doubt is truth-involving: uncertain beliefs (also described by Descartes as 'probable') are to be rejected for the reason that they are untrue.² The weaker notion of uncertainty connected with the sceptical arguments is by contrast truth-neutral: it is compatible with the uncertainty of a belief, established by adducing these arguments, that it be true.

Normally, even a sympathetic reader has a great deal of difficulty in seeing why he should agree that the uncertainty of a belief rationally obliges its non-acceptance, since, *prima facie*, it does not strike him as in the least irrational to be guided epistemically by the

2. For reasons to be entered below I prefer 'untrue' or 'not true' to 'false'.

analogue of the principle which guides many of us judicially: 'Innocent until proven guilty'. But while it remains to prove that the term 'uncertain' is affected by the preceding equivocality, note the following quantum gain which is made if the claim of equivocality is credited. If it can be inferred from the uncertainty of a belief that what is believed is untrue, the difficulty evaporates. Whatever else the sympathetic reader may contest, he will not contest that the untruth of a belief counts as rationally compelling reason for its non-acceptance.³

I am proceeding here by addressing a received view of Descartes' position, rather than by examining his writings in an unmediated manner. So this is not the place to expound, or expand upon, the equivocality. But a couple of claims may be quoted which vouchsafe a glimpse of its textual reality. In Rule 2, Descartes states that, under the aegis of the 'maxim' of doubt, we are to 'reject all...merely probable knowledge and make it a rule to trust only what is completely known and incapable of being doubted' (/3). And a bit further on he adds that 'we cannot attain to a perfect knowledge in any...case of probable opinion' (/ibid.). I already observed that the *Rules* is largely free of those sceptical materials which dominate the landscape of Meditation 1. So, uncontroversially, these claims are primarily connected in Descartes' mind with the principle — the 'maxim' — of doubt. Consider now how the truth-neutral grammar of 'uncertain' is violated in the quoted lines. Normally, it is compatible with describing one of a subject's beliefs as uncertain to state that it might become certain providing the subject's evidence is suitably augmented, whether by application, luck, or whatnot. In asserting that 'complete' or 'perfect' knowledge cannot be achieved in respect of a belief which is 'probable' or 'uncertain', Descartes is

3. Actually, there may be *practical* reasons for accepting a belief which is (known to be) untrue, as in the case of Newtonian mechanics. So a substantive assumption lurks behind the claim that a belief's falsity obliges its rejection. It is still evident, despite this, that relativising rational acceptability to truth is nowhere near as substantive as relativising it to knowledge. As it happens, Descartes is, we shall see, aware of the possibility of assailing the principle of doubt on practical grounds.

therefore implying that an uncertain belief is in some sense untrue in itself.

The distinction adumbrated here remains to be clarified. Assuming that clarificatory efforts will bear fruit, it is easily appreciated how an interpreter who fails to recognise the ambiguity, and *a fortiori* fails to enforce a separation of the senses, will run into difficulty when construing Descartes' negative thesis about perceptual cognition, that perceptually grounded beliefs are 'uncertain' in the truth-involving sense. (I take it as granted that Descartes does hold these beliefs to be untrue. Evidence will be supplied shortly.) The sceptical considerations of the opening Meditation do not appear to contribute support to such a result. At most, they underwrite the conclusion that the subject's beliefs are 'uncertain' in the truth-neutral meaning of the term, i.e. that in spite of what he may uncritically think he is ignorant of their truth. And this conclusion falls distressingly short of the minimum required to further Descartes' negative aim.

4. CP, PD, SA: a blueprint

The well-known *impasses* in received interpretation of the Cartesian critique of the senses result from a constant failure to identify the thesis that Descartes is out to establish, viz. that perceptually-grounded beliefs are truth-involvingly uncertain, and from the complementary failure to appreciate that he does not advance the sceptical materials of Meditation 1 in a strictly probative capacity. That these materials are neither suited to proving nor designed to prove the thesis would only mark a decisive flaw in the overall position if Descartes had nothing else to offer in direct defense. But he does have more to offer, though at the stage of the opening Meditation it enters somewhat recessively, and is overshadowed by the highly dramatic sceptical points. The structural reasoning about sense-based cognition — the reasoning which is directly associated with the principle of doubt — constitutes the addition. Postponing the textual location and assessment of this reasoning and taking as my

primary data the readings advanced by those who fudge the actual division of rhetorical labour, I want, in preparation for positive exposition, to illustrate the way in which intolerable results are reached by travelling this route.

The problem can be restated with greater precision. Descartes' sceptical argumentation does nothing to establish the untruth of sense-based beliefs; their truth-involving uncertainty. The sceptical argumentation is compatible with a proposition whose rejection is demonstrably crucial to Descartes' project. The proposition, to be denominated *the conditional proposition*, states that if the experiencing subject could determine that he is sense-perceiving as opposed to dreaming, and that his sense-experience is non-deceptive, he would then be entitled to take the representative content of his state of consciousness to deliver accurate information about the world; he would be justified in regarding the proposition expressing the representative content of that state as true. I said that Descartes' rejection of the conditional claim is uncontroversial. Evidence will be found, for example, in Meditation 6, where it is asserted that corporeal things 'are...not exactly what we perceive by the senses' (/191). One who purposes to determine the state of the world 'exactly' cannot rely on the senses, even supposing experiential conditions to be optimal. Similarly, the point is made in *The Search After Truth* that 'our senses... perceive that alone which is most coarse and common' (/312) — a point which receives a wholly general formulation on several occasions in the *Principles*: 'in truth we do not perceive any object as it is in itself by sense alone' (1.73/251); '*the perceptions of the senses do not teach us what is really in things*' (2.3/255).

With the conditional proposition in hand, the situation of the prospective interpreter can be described in a helpfully schematic fashion. In addition to Descartes' rejection of the conditional proposition (I will henceforth code the proposition as CP, its denial as CP*), a rejection expressing the negative thesis that sense-based beliefs are untrue, the other two data with which the interpreter must contend are the principle of doubt (PD), that 'uncertain' beliefs are rationally unacceptable, and the sceptical argumentation (SA) concerning

dreaming and waking, delusive and non-delusive sense-experience, etc.

SA cannot sustain CP*. An interpreter who takes PD to be worked out by SA, i.e. who takes SA to comprise Descartes' application of PD to sense-based beliefs, is obliged to conclude that CP* is unestablished by what Descartes puts into Meditation 1. Typically, since those who so regard the link between PD and SA recognise that CP* is crucial for Descartes' push towards 'science', they represent him as erroneously using SA to defend CP*. The net result is a sorry litany of Cartesian misconceptions — and hence an account of Descartes' reasoning which is exclusively diagnostic, without an atom of justificatory power. Another approach is possible. Some interpreters (in my view correctly) hold that SA is not used by Descartes directly to sustain CP*. But because they detect nothing in the first Meditation relevant to CP* besides SA, they are boxed into the unhappy adversary condition of maintaining either that Descartes' support for CP* is non-existent or that its defense is predicated on question-begging assumptions guilefully spirited in between the lines.

The same error is committed by proponents of each approach: failure to recognise the independent status of PD. The decisive riposte to those who take the first line is that PD, not SA, is at the core of Descartes' argumentation for CP*. So he cannot fairly be accused of unconscionable rhetorical trickery. And *pace* followers of the second line, Descartes' SA-independent defense of PD, which they fail to discern, clears him on the charge of reaching CP* dogmatically.

5. *SA and the rationality of doubt*

'[I]t is sometimes proved to me that these senses are deceptive' (Meditation 1/145). From the well-known fact of occasional sense-deception Descartes extracts the moral that the senses are to be mistrusted generally: 'it is wiser not to trust entirely to any thing by which we have once been deceived' (ibid./ibid.). Since, on a natural reading, there is nothing contentious here, there is also little to advance Descartes' case. If on occasion an informant has misled me,

wilfully or in good faith, it isn't an unreasonable policy to take everything he says with a grain of salt. But it doesn't follow that all the information he supplies is inaccurate. So the fact to which Descartes calls attention has no tendency to show that the senses never supply accurate information, let alone that due to some irremediable flaw they cannot supply it.

A great number of interpreters have not shrunk from maintaining that Descartes does argue invalidly along roughly these lines; that he alleges, on the strength of the premise that any proposition believed in which is engendered in a sense-based way might be false, that all propositions assented to on sense-based grounds might be false. Obviously, this argument deserves no more consideration than the formally parallel move from the truth that, compatibly with the present existence of the human species, any parent of a previous generation might have been childless, to the falsehood that every parent of that generation might have lacked issue. But in this way, unflattering though it be to Descartes, a link is forged between SA and the denial of CP.

Compatibly with my general thesis about the proper interpretation of the first Meditation, I will eventually show that Descartes defends CP* without passing invalidly from 'any' to 'every', or from 'some are' to 'all might be' and thence to 'for all intents and purposes, all must be regarded as if they are'. Even were no alternative construal actually available, one might have thought that the interpretation sketched would be regarded with grave suspicion because of its excessively unflattering character. However, it is just possible, without transcending the sceptical materials of Meditation 1, to absolve Descartes of committing the mentioned errors. It can be maintained that Descartes introduces the dream-argument (which is part of the sceptical arsenal) in order to impel the mildly critical reflective thinker to cast a general doubt on his sense-based beliefs. If so, it isn't merely because of occasional sense-deception that he is obligated to distrust his eyes, ears, and so on. What obligates him, rather, is the possibility that whenever he thinks himself to be sense-perceiving he might in fact be dreaming.

Descartes is indeed cleared along this line of the preceding

elementary logical blunders. But the 'improved' argument breeds new problems, and considered in the context of Descartes' wider project has nothing else to recommend it than the momentary relief it brings. After what must strike sponsors of this construal as a worryingly complacent consideration of the nature of dreaming, Descartes concludes that 'there are no certain indications by which we may clearly distinguish wakefulness from sleep' (/146). (I might just add that though Descartes' remarks about dreaming are casual, the charge of complacency is in my view unjustified since, as I shall argue, he doesn't attach much importance to the issue.) Those who opt for this line cannot fail to be embarrassed by the fact that the conclusion appears to clash with what Descartes requires. Suppose the absence of criteria is conceded. Surely the implication is that *if there were* effective grounds for distinguishing wakefulness from sleep the subject could take the representative content of those states identified as waking states to inform him accurately about the condition of the world. A useful way of confirming the thought is by inverting Descartes' reasoning, i.e. by exploiting the (alleged) absence of criteria as a ground for maintaining that when any of us thinks himself to be dreaming he might be mistaken. It follows that one who insists that he is dreaming in support of the denial that his state of consciousness vouchsafes him information about the world might be in error. He might, that is, be awake. But if he is awake, doesn't the logic of the argument dictate his denial of objective fidelity to the representative content of his consciousness to be itself in error?

As far as its standard sceptical content goes, the strongest effect which Descartes' dream-argument could plausibly be thought to have on the normal subject is to induce in him, whenever he is inclined to believe that he is, say, seeing the sun, the thought that he may only be dreaming that he is seeing it. By analogy, an air-traveller might be right to wonder whether his plane has landed in Detroit or in Washington. But if the traveller knows that his carrier travels to these two destinations alone (*mutatis mutandis*, Descartes never considers a third possibility distinct both from dreaming and waking), he could still be sure that he is either in Detroit or in Washington. For him to use his uncertainty as a ground for withhold-

ing assent from the assertion that he is in either city would require treating 'Detroit or Washington' as an indissoluble unit — so that one who correctly describes himself as being in Detroit or in Washington could not by simple logic conclude that it is either true of him that he is in Detroit or true of him that he is in Washington. This is, I take it, patently preposterous. By parity of reasoning, it follows that if the subject who does not know whether he is dreaming or awake is in fact awake, then what his senses tell him constitutes accurate information about the world.

Faced with this kind of difficulty, some interpreters are motivated to suggest that Descartes' real concern in the first Meditation is only to show, on the strength of the sceptical considerations, that no subject is rationally entitled to place credence in beliefs engendered by sense-perceptual means, and consequently that all such beliefs must be rejected in accordance with PD. This is one way of interpreting the principle; the wrong way, I believe. But whether or not the content of the suggestion is independently true, the interpreter we are at present engaging is in any case precluded from offering it in Descartes' name. On such a line, the rationality of doubting, conceived as based on SA, is cut loose entirely from Descartes' positive conception of knowledge — precisely for the reason that one who agrees that he is rationally obliged to doubt his normal beliefs in this sense can still cleave to CP. Consider our air-traveller again. Having enplaned in haste via the gate for the (different) shuttle flights to the two destinations, he isn't rationally justified, upon landing, in coming down firmly in favour of one of the disjuncts: 'Detroit or Washington'. But there is obviously no denying that he is in one of the cities, not in some ontologically monstrous disjoint metropolis. (Plainly, wavering between the disjuncts doesn't constitute a third option.) So construing the issue of rational entitlement therefore disconnects it from the issue of truth: that a subject is unentitled to pronounce for *p* is neutral on *p*'s truth-value. But isn't it a basic premise of the interpretation that Descartes thinks himself to be impugning CP (i.e. supporting his negative conclusion) by adducing SA? If the interpreter remains faithful to the premise, he finds himself wedded simultaneously to claiming, on the one hand, that the dream-possibility is introduced by

Descartes in order to avoid the elementary error of passing from occasional to exceptionless sense-deception, and on the other hand to conceding that the whole issue of dreaming really has no power to advance the project. Isn't this intolerable? Since the interpreter holds out no hope for Descartes' argumentation in the first place — SA, he realises, cannot establish CP* — *his* insouciance doesn't surprise. But the genuine intolerability of the outcome will emerge if we reconsider the textual siting of the dream-possibility.

The case of dreaming is introduced by Descartes after a brief examination of the facts of non-veridical sense-experience. Pondering the matter for a moment, it quickly becomes plain that the very conclusion Descartes is represented by our man as resting on the dream-possibility could be rested not one whit less effectively on the uncontentious facts of delusive sense-experience. We may agree that confusing a dream-state for a waking experience is more drastic than confusing a non-veridical sense-experience (e.g. the experience of the square tower in the distance as round) for a veridical one. But since the general doubt is held to be based by Descartes on the possibility of confusing veridical experience for something else, exactly the same effect could be achieved without bothering at all with dreaming. Because error is used to explain error on this interpretation, a rhetorical reason can be conjured up for Descartes' having introduced the probatively useless issue of dreaming: had he permitted his argumentation to unfold entirely within the waking realm, even a docile reader would have noticed that something is sorely amiss. 'Veridical sense-experience' *means* 'experience via the senses which supplies *true* information about the surroundings'. Consequently, the reader could scarcely have failed to realise that Descartes' argumentation here commits him to the conditional proposition. Removing to the case of dreaming (it is therefore claimed) serves the purpose of delaying the realisation. I do not say, incidentally, that Descartes' introduction of the dream possibility does not play this purely rhetorical role. But it is one thing to maintain that Descartes frames his reasoning in this fashion in order to prevent the reader from noticing the commitment to the conditional proposition, when it is also denied that he has any

non-question-begging basis at all for rejecting it; quite another to maintain that Descartes adopts this debating tactic because he has such a reason up his sleeve.

These claims about Descartes' motives are, I concede, a trifle conjectural. However, for a further reason, it is in any case perfectly obvious that the interpretation is inaccurate. Descartes returns in Meditation 6 to reconsider the problem of distinguishing dreaming from waking life. Never mind the limited merit of the solution offered, with its fragile appeal to divine veracity. The point to note is that the solution put forward is completely neutral on the truth-value of the conditional proposition. For, once again, Descartes holds that the beliefs we base on (genuine) sense-information are unsuited for inclusion in the 'scientific' picture of reality. Even if he admits that the distinction can effectively be made, Descartes would still forbid us to repose scientific trust in those standard factual propositions which express the representative content of waking states. The capacity effectively to determine that the second of the prefixes 'I am dreaming that I am sense-perceiving' and 'I am sense-perceiving' applies is not one and the same as the capacity effectively to determine the 'exact' state of the world. So we have no option but to assign to the sceptical argumentation of Meditation 1 a secondary or non-probative position in the overall structure. This is not, I emphasise, to demote SA to a secondary position despite Descartes' own attitude towards it. It is to recognise that Descartes himself does not advance SA as a premise in demonstrative support of CP*.

6. *Weak rationality: Kenny's interpretation*

To reach his negative goal of establishing the scientific deficiency of sense-based information, Descartes must show that such data are compromised in the dimension of *truth*. Genuine success will not be gained here by hammering away, however forcefully, at the difficulty of distinguishing a veridical from a non-veridical sense-experience, or the difficulty of consciousness which only appear to have a sense-perceptual origin, since neither of these delivers a logical body blow

to CP. In fact, CP would naturally be regarded as acceptable to a theorist whose main concern lies in demonstrating the severity of such problems. Unless Descartes is to an astonishing degree oblivious of what reaching his *terminus ad quem* requires, the argumentation he supplies should therefore be amenable to reconstruction without essential appeal to anything other than cases of perception which qualify, and qualify even paradigmatically, for characterisation as 'veridical'. One would not expect the demonstrative topology of the Cartesian system to be fundamentally different even if experiencing subjects passed all their nights in unconscious slumber and all their days in optimal employment of their eyes, ears, etc.

It might be claimed, as indicated above, that the desired effect of SA is to induce in the rational subject a doubt as to whether he is, say, seeing the sun or merely dreaming that he is seeing it. Certainly, this line of interpretation raises problems for Descartes' wider project. But the argument might still be made that my attempt to motivate a 'deeper' reading of Meditation 1 comes to grief on it. For Descartes' aim in the first Meditation is to show that sense-based beliefs fail to qualify as 'certain', and the stated effect seems appropriate to the aim.

So to reason is to grant that Descartes doesn't intend SA to function in defense of CP*. In view of the gap thus recognised between the two, a sponsor of this second line therefore has the luxury of a choice when he comes to explain what the rationality of Cartesian doubt consists in. A proponent of the first line, since he represents Descartes as using SA to establish that sense-perceptual beliefs are untrue, has no choice: he must attribute to Descartes the thesis that the rational unacceptability of any such belief is due to its truth-involving uncertainty. In principle, an advocate of the second line isn't prevented from taking the same stand on this matter. But Descartes, in his view, uses SA to establish only that the rational subject has no right to assent to his normal sense-based beliefs; so he is more likely to construe the rationality of doubt as relative to knowledge than as relative to truth. This is obviously a weaker conception of rational obligation, inasmuch as a subject who unreservedly agrees that assenting to his perceptually-acquired beliefs is irrational in this sense can nevertheless continue to insist that the

propositions believed might still be true. Consequent upon the weakening, a price must therefore be exacted in compensation. Descartes' rejection of CP is vital for the success of the Cartesian programme. The interpreter who reads the texts in the manner described therefore has no alternative but to agree that CP* is supported only dogmatically in Meditation 1, from which it has to follow in his judgement that whatever Descartes might himself have thought the subject can demur at the meditative critique of the senses as possible sources of truth without prejudice to his baseline rationality qua opponent of falsehood.

As I see it, the obligation Descartes regards the rational subject to be under is the stronger one. Though supporters of the first line are right in little else, they are right to maintain that the rationality of doubt is according to Descartes relative to truth, i.e. that the rational subject is in Descartes' view committed to discarding the propositions expressing the representative content of states of consciousness resultant upon direct sense-employing contact with the world because they are untrue. These interpreters go wrong however in failing to recognise that Descartes doesn't defend the obligation via SA. Here, those who support the second line are in the right. But their advantage is accidental and momentary; they in turn err by charging Descartes with establishing the obligation in a dogmatic fashion.

The interpretation now to be examined, A. Kenny's,⁴ isn't a pure exemplification of the second line. But it sufficiently matches that line in its initial assumptions profitably to be approached as a version thereof. Because of Kenny's sensitivity to relevant features of the texts, he is forced, in spite of his basic assumptions, to move beyond SA to PD. As I explained, the notion of uncertainty informing PD is truth-involving. The materials Kenny introduces in the frame of a construal which is perceived by him as interpreting the obligation truth-neutrally are materials which in actuality implicate Descartes' truth-involving sense of the notion. By concentrating on Kenny's deviations from a pure exemplification of the second line, considerable insight can therefore be gained into the true character of the Cartesian position.

4. In *Descartes: A Study of His Philosophy* (New York, Random House, 1968).

7. Kenny's unwitting flitting

The objective of the opening Meditation is negative. So far as the first cognitive foundation goes, the goal is to show that the rational subject is under an obligation to reject each of his sense-based beliefs on the grounds of uncertainty. Kenny's charge that '[a] universal doubt is neither necessary nor rational'⁵ isn't levelled against the independently debatable principle that a belief which turns out to be uncertain should be discarded; it is levelled against Descartes' blanket characterisation of sense-based beliefs as uncertain. The kernel of Kenny's critical reaction to this Cartesian thesis is found in the following interrogative salvo, whose missiles are regarded as rhetorical:

why should the fact that I have *some* false beliefs prevent my being certain about *any*? Can *none* of my beliefs be certain unless *all* are certain? Descartes' argument presupposes this, but he offers no proof of it.⁶

To which argument is Kenny referring? He is referring to SA. But wouldn't it have been more accurate for Kenny to have described Descartes' proof as inadequate, not as non-existent? By exploiting the tell-tale shift from 'false' to 'certain' in the first sentence quoted, we can formulate a claim for which SA indeed supplies no proof at all, *a fortiori* not even an inadequate one, viz. that the falsity of one of a subject's perceptually-acquired beliefs is incompatible with the truth of any of them. To this claim SA is entirely tangential, since the uncertainty whose attribution it supports is compatible with truth. Surely though, it is an exaggeration baldly to declare that SA gives no support to the corresponding claim about certainty. Agreed, what I say about falsity could also be said about uncertainty if 'uncertain' is construed in a truth-involving way — so that a belief's falsity can be inferred from its uncertainty. But in light of the manner Kenny adjusts his formulation in the second sentence it is obvious that he isn't thinking of 'uncertain' as a truth-involving term. Still, though as a matter of *psychological* fact Kenny plainly doesn't have such a sense

5. *Descartes: A Study of His Philosophy*, p. 20.

6. *Descartes: A Study of His Philosophy*, p. 19.

in mind, the difficulty points in a definite direction. It hints that as a matter of *analytic* fact Kenny is associating with PD theses separable from SA. Now this has been my suggestion precisely: the texts contain PD-associated and SA-unassociated theses. But only an interpreter explicitly aware of how sharply these are dissociated from SA is likely to reap benefits.

Kenny flits between the two meanings of 'uncertain', treating it at times as a virtual synonym of 'false', at times truth-neutrally. While Descartes' formulations leave a great deal to be desired, when all is said and done *his* position on this matter isn't indiscriminate. He possesses arguments for the strong claim that the falsity of any one of a subject's sense-based beliefs is incompatible with the truth of any other. Because these arguments are formulated by means of 'uncertain', they are obscured from the latter-day reader's view, since his field of vision contains only the truth-neutral term.

Kenny recognises that SA doesn't function by itself in Descartes' hands to support CP*. This is what he means when he declares that Descartes' argument offers no proof. Accordingly, his interpretation follows the second line. But, to repeat, Kenny's error consists in overlooking the independent status of PD in the overall reasoning. 'Descartes' argument' is far from exhausted by SA.

To sharpen our view of the gap here, let us set out afresh, the precise object being to see how the various textually-motivated moves made by Kenny bring him into conflict with his own truth-neutral reading of the Cartesian notion of uncertainty.

In the second sentence of the passage set off above, the sole premise that Kenny attributes to Descartes is, then, the (surely unexceptionable)⁷ premise that some among a normal subject's beliefs

7. I parenthesise the qualification to indicate that the thought it voices is Kenny's own. In the event, the premise is not all that unexceptionable. Descartes' project is so extreme that it should be tested against an opponent who is equally extreme, short of self-contradiction, in his resistance. And though it may be immodest, it is not logically incoherent for a subject to claim impeccability in his normal beliefs. In what follows, I will show that Descartes' actual argument is effective against even such an opponent, and is intended to be — a result which will *ipso facto* show that Kenny's reading is mistaken.

are bound to be uncertain in this sense. Couldn't the premise be granted even by one who contests everything else Descartes says in the course of arguing sceptically about the difficulty, or impossibility, of distinguishing dream states from waking experience, or delusive from non-delusive perceptions?

Even if we respond affirmatively, an embarrassing question arises. Solely on the strength of the premise of sure uncertainty among a normal subject's beliefs, how can Descartes advance towards his negative goal? Kenny, basing himself on Cartesian remarks to be examined presently, responds that Descartes' advance is aided by a principle, adumbrated already in passing, which I shall refer to as *the principle of the infectiousness of uncertainty*: uncertainty at any one place in the subject's fabric of belief communicates itself to the occupants of every other place in that fabric.

The principle can be interpreted weakly: because a subject's stock of beliefs, acquired in the normal course of sense-perceptual commerce with the world, invariably contains some which were accepted for less than the best possible reasons — a result, typically, of the exigencies of action, which render unremitting vigilance or concerted attention unfeasible — the subject should be motivated to agree, on inductive grounds, that even those sense-based beliefs he is pre-reflectively inclined to designate as beyond reproach might have been accepted despite his failure to exercise the highest degree of critical scrutiny.

This weak reading of the principle leaves the argument in a sorry state. Required is a demonstration that because uncertainty invariably taints some of the normal subject's beliefs, it does affect each and every belief. But even if the subject grants that all his beliefs might be uncertain, that wouldn't clash in logic with an insistence on his part that some of them might be certain. This is after all part of the force of the first 'might' here, as the following valetudinarian analogy suggested by the principle's name confirms. That one of several patients on a ward is diagnosed to have a highly infectious disease would create a presumption that all the patients are afflicted: all of them might be infected. The presumption is however compatible with the truth of the assertion that some of the patients haven't

contracted the malady. *Mutatis mutandis*, it would be irrational for the subject, so far as the inductive reasoning goes, to tar all his beliefs with the brush of uncertainty because of the uncertainty of some.

If Descartes' argument followed the preceding pattern, it wouldn't merit continued attention. The logical flaw is further indicated by noting that, on the construal sketched, 'infectiousness of uncertainty' is a misnomer. An advocate of the inductive argument doesn't hold that an uncertain belief communicates *its* uncertainty to others: actual contamination isn't claimed. The thesis is only that reasons of the same kind that imply the uncertainty of the belief might also impugn the certainty of others.

Descartes, according to Kenny, endorses a form of the principle of infectiousness which does not have this (too) weak character. He is portrayed as contending that uncertainty is *actually* infectious: if any belief is uncertain, then all beliefs are uncertain. On this strong construal of infectiousness, Descartes' argumentation regains its logical respectability. If the rational acceptance of a proposition requires that it be certain, and if uncertainty actually contaminates, then the subject is rationally obliged on simple logical grounds to reject all of his beliefs once he concedes the uncertainty even of one of them. And the obligation turns categorical given that the degree of caution which a normal subject with a moderately varied experience of the world can be expected to have exercised before annexing a proposition to his store of beliefs is such that he will invariably find some uncertainties therein.

Why however should we be expected to agree that uncertainty is actually infectious? Nothing Descartes says in the course of SA supports such a principle or commands our assent. Kenny claims that Descartes *presupposes* the principle. And while he does not explicitly assert this, Kenny clearly thinks that Descartes presupposes the principle as a *sine qua non* of achieving his desired result via SA, viz. that the rational subject is obliged to reject all of his normal sense-based beliefs. But Kenny's thought here is mistaken. It is simply too obvious that the content of Descartes' SA supports nothing beyond the weakly inductive claim of infectiousness. It should not be retorted that Kenny knows this to be true, and ascribes the presupposition to

Descartes precisely because he attributes a similar knowledge to him. By reference to what I have said in a slightly different connection, it is easily seen that Descartes' acceptance of a principle of actual infectiousness would have obviated all need for him to leap headlong, as he surely must seem to Kenny to be leaping, from the frying pan into the fire, i.e. from the moderately contentious problematic of delusive and veridical sense-experience to the radically contentious dreaming/waking problematic. For the strong principle of infectiousness would itself justify classifying every waking belief as uncertain because of the uncertainty of some — even of one. So it is doubly implausible to hold that Descartes presupposes the principle in the context of SA. (It is indeed triply implausible. The additional source of implausibility will be identified in the second paragraph of the upcoming section.)

As mentioned, Kenny attributes the principle to Descartes on the basis of texts. But when we examine the relevant passages, which I now propose to do, it emerges that SA has in fact been left far behind. So, again, it is insupportable to pin the principle on Descartes in the frame of an attempt to reconstruct his SA-associated thinking.

8. *Unified science and the infectiousness of uncertainty*

'Why', Kenny was quoted to ask, 'should the fact that I have *some* false beliefs prevent my being certain about *any*? Can *none* of my beliefs be certain unless *all* are certain?' In themselves, these are good questions. As we normally conceive falsity and uncertainty, neither of them is actually infectious. But Kenny is not imputing to Descartes an elementary misunderstanding concerning the logic of these notions. Kenny maintains Descartes' advocacy of the strong principle of infectiousness to be based on yet a further Cartesian thesis. With an eye on a passage like this, that 'all the sciences are conjoined with each other and interdependent' (Rule 1/2), and on Descartes' talk of 'the fabric of the whole world' (*Principles* 4.205/301), Kenny observes:

Descartes believed that all human sciences formed a unified whole, so linked together that it could be held in one's mind with no more difficulty than the series of natural numbers. If this is so, then a man's scientific beliefs must either be all true or all doubtful.⁸

If *this* is so, Descartes cannot be convicted of sinning in an elementary way against the logic of 'probable' or 'uncertain' and 'false'. Because Descartes takes scientific knowledge to be unified (I will call this *the unified science thesis*), he sees falsity or uncertainty at any one place in the fabric of belief being transmitted to other regions.

Kenny's words contain an obvious difficulty. Suppose that all scientific beliefs are regarded by Descartes as interconnected — deductively one assumes. It does not follow that a man's unscientific beliefs are so interconnected. With what right then does Kenny proceed to represent Descartes as arguing from the falsity or uncertainty of one of a subject's beliefs to be falsity or uncertainty of them all? Compliance with the internal logic of his own thinking requires of Kenny that he interpret Descartes to be making an entirely different move: from the fact that falsity and uncertainty are *not infectious* in the case of ordinary beliefs to the conclusion that these beliefs aren't scientific.

Though this inversion of the proper order is a pretty conclusive sign that Kenny hasn't thought the approach through, another feature of his discussion holds more immediate interest. In the passage last quoted Kenny links the notion of doubtfulness, of uncertainty, to the notion of truth-value: by writing that a man's beliefs must either be true or doubtful, Kenny allows his words to imply that doubtful beliefs are untrue. Since SA operates with a truth-neutral sense of 'uncertain' or 'doubtful', it follows that, unknowingly it appears, Kenny has effectively passed beyond SA. Whatever Kenny may think himself to be doing, he isn't merely attributing additional views to Descartes which the latter can plausibly be regarded as using to beef up the sceptical materials so as to sustain the desired outcome.

This puts virtually beyond challenge my claim that Descartes cannot correctly be construed as attempting in the first Meditation to

8. *Descartes: A Study of His Philosophy*, p. 19.

demonstrate CP* on the basis of SA. Not only is it mistaken to hold that SA itself functions in Descartes' hands to undermine CP, but it is also erroneous to maintain that Descartes supplements SA with auxiliary assumptions (the thesis of unified science and its train, Kenny would have us believe) in order to make the case. Since the additional assumptions treat 'uncertain' truth-involvingly, they cannot mesh with SA's truth-neutral homonym to support any conclusion towards which SA itself points but which it is too weak to establish.

It is, I suppose, because Kenny is convinced of the futility of defending Descartes' position that he is less than vigorous in attempting, given this last fact, to unravel the argumentational threads of the opening Meditation. Why should he expend the energy believing as he does that the main SA-augmenting assumption — the thesis of unified science — 'is not a premise to which Descartes can fairly appeal in order to convince the uncommitted reader of the need for the method of universal doubt'⁹? But if we examine more closely why Kenny claims that Descartes is unentitled to the supplementary assumptions, it begins to appear well-nigh unquestionable that he could not conceivably be premising any such thesis.

The assumption of unified science, offered as clearing Descartes of the elementary error about falsity and uncertainty, collides head-on with a serious commitment to doubt. Not that in the context of what is expressly described as a comprehensive intellectual prophylaxis Descartes is entitled to *no* assumptions whatever, *a fortiori* not to the thesis of unified science. It will remain a vexed issue of Cartesian study *which* assumptions are compatible with the doubt. Can Descartes legitimately help himself to logic? to simple natures? to cognitive capacities bound up with doubting? These issues require, and some are treated by Descartes to, special debate. The point, rather, is that even by the most lenient standards the thesis of unified science is far too meaty a thesis to stand the slimmest chance of slipping through compatibly with a sincere regard for the injunction 'to doubt all things in which the slightest trace of incertitude can be

9. *Descartes: A Study of His Philosophy*, p. 19.

found' (*Principles* 1.1/219). Even if it could for example be established that Descartes' serious commitment to the method is not compromised by his (tacit) acceptance of logic, he could not conceivably have allowed himself, compatibly with the conditions of doubting, to proceed complacent in the belief that the sciences are woven into a single seamless fabric.

Though it is true, it is forceless here to rejoin in Kenny's defense that Descartes does assume all manner of doubt-incompatible 'principles', e.g. the metaphysical principle of causation used to establish God's existence. For what Kenny states is at odds not only with a serious regard for the principle of doubt (so is the causal principle), but also clashes with Descartes' claim that the doubt halts at the *cogito*. Much is uncertain about Descartes' position. But it is at least clear that he thinks the *cogito* to supply the doubting subject with a piece of certain knowledge unsullied by the masses of doxastic detritus which normally weigh him down.

Evidently, Kenny's exegetical morass results from a failure to observe the distinction between Descartes' negative point in the first Meditation, that a sense-based conception of the world is in principle unscientific, and the positive conception of scientific knowledge which informs the constructive parts of the position. Though the thesis of unified science may well be something Descartes does assume when arguing constructively, it makes no contribution to his critique of perceptual cognition. Indeed, because of the obvious difficulty noted in the second paragraph of the section, Descartes would have had to be very badly confused to use the thesis in developing the critique. Similarly, the attribution of truth-involving uncertainty to perceptually-based beliefs isn't rested on SA, since it is plain that the sense of 'uncertain' which figures in SA is truth-neutral.

9. From 'any' to 'every': a valid argument

With the preceding lines of interpretation in disarray, the desirability of an alternative is apparent. Indeed, the rather systematic way in which the various options open to one who takes the standard

approach fail creates an exegetical obligation to seek something better. The weakness of the first line of interpretation supports the conclusion that SA is not used by Descartes strictly to justify CP*. From the manner Kenny's version of the second line collapses, it is also clear that a proper reading must explicitly distinguish the truth-involving and the truth-neutral senses of 'uncertain', since there can be no real doubt that Descartes' defense of the claim that perceptual beliefs are 'uncertain' in the former sense — a claim needed for his wider purposes — is in principle incapable of being fashioned from materials supplied in SA.

Fruitful destructive criticism must lead to construction. To conclude, I will locate the precise point on which the proper representation, and possibly defense, of Descartes' negative thesis will turn. Kenny's discussion helps to locate the pivot.

Descartes, according to Kenny, illicitly imports the unified science thesis in order to justify the move from 'Some sense-based beliefs are uncertain' to 'All sense-based beliefs are uncertain'. Failing the importation, Kenny maintains, Descartes' transition would be invalid for transparent logical reasons. (More complex formulations of the move are also possible, e.g. that Descartes argues that every sense-based belief is uncertain if any is, and relies on the unexceptionable proposition that at least one of a normal subject's perceptual beliefs is bound to be uncertain. As before, the argument will be said to go through in logic once the unity of science is premised.)

Though the repellant diagnosis implied by this — that Descartes' argument is either elementarily invalid, or else that Descartes purchases validity by smuggling in a dubious premise — seems exhaustive, it isn't. Descartes moves from 'some' to 'all', or from 'any' to 'every'. But neither is the move he makes invalid, nor is its validity relative to a dogmatic assumption. (I repeat that the unified science thesis is in any case irrelevant to the transition, however interpreted. The beliefs under scrutiny here are, according to Descartes, unscientific, and the thesis applies to scientific beliefs.) Has Descartes been granted immunity from the logical commitments which bind the rest of us? Nothing of the kind. Rather, there is a

valid any-every (some-all) pattern of reasoning; the very pattern Descartes' reasoning actually exemplifies.

If any bachelor is unmarried, then every bachelor is unmarried. This transition is logically unimpeachable. True, the intersubstitution of 'undernourished' for 'unmarried' yields an argument which may lead from truth to falsehood. But this shows only that the initial, valid, argument is such that the replacement of terms will be disallowed. Very roughly, its real form is given by the following: if any F-thing is a G-thing because of what 'F' means (better: if it is essential to any item's being an F-thing that it be a G-thing) then every F-thing is a G-thing. Obviously, it is untrue that an undernourished bachelor is, qua bachelor, scrawny. So the stated replacement is blocked.

Descartes' any-every (some-all) transition in the first Meditation has this character. As he writes: 'if I am able to find in each [opinion] some reason to doubt, this will suffice to justify my rejecting the whole' (/145). (The French version has '*toutes rejeter*', of which 'rejecting them all' or 'rejecting every one of them' is a better rendering than Haldane and Ross's 'rejecting the whole'.) If so, no any-every fallacy is committed. And do we, to warrant moving from 'any bachelor is unmarried' to 'every bachelor is unmarried', require a principle of unified bachelorhood? So the acceptability of Descartes' argument is not a hostage to any dogmatic reliance on the thesis of unified science.

The protest will be made that the argument, so understood, can only by courtesy be described as involving *a move* from 'any' to 'every'. This need hardly worry us, as the question is one of interpretation. Obviously, it is disingenuous of a Cartesian opponent to express surprise if, having decided in advance that Descartes' argument is at base inductive in character, he finds it deductively wanting.

II The Senses

Descartes' rejection of sense-based beliefs is grounded in a *structural* analysis of sense-based cognitive contact with reality. Because of the very structure of this mode of experience, the beliefs acquired thereby in principle fall short of the requirement of certainty. In principle, each such belief cannot be more than 'probable'; and the probability of a belief, in Descartes' sense of 'probable', is incompatible with the truth of the proposition believed. Two lines of support for this reading are located in the first Meditation, and the structural theme is traced through the whole Cartesian *corpus*. It is demonstrated that Descartes' structural analysis can be revived in modern, analytic, terms, with the help of the thesis that the semantics of standard factual propositions are non-realist. Accordingly, the analysis continues to hold interest even for contemporary epistemologists. From this it follows that *negative* thrust of Cartesianism — its treatment of mundane cognition, its policies and products — is interpretable, and hence evaluable, quite apart from any commitment to positive and problematic Cartesian views about 'real knowledge'.

1. *Action and God: two cognitive stances*

At its core, Descartes' critique of sense-based experience is structural in character. Because of the very structure of this mode of cognition, the beliefs acquired by the subject in the normal course of perceptual contact with reality are 'not entirely certain', and the propositions which express the factual content of these beliefs do not therefore pass scientific muster. The sceptical materials of Meditation 1, silent on the structural considerations, play at most a subordinate, consolidative, role in Descartes' push towards science.

Two lines of support exist in the first Meditation, both distinct from the sceptical materials Descartes mobilises, for the conclusion that sense-based beliefs are, in accordance with the principle of doubt, rationally unacceptable. Our task is to locate and elaborate these lines.

The reader's attention is quickly caught at the start of Meditation 1 by a somewhat unusual use of the term 'action'. Descartes explains why the time is ripe for his project:

I should feel that I was doing wrong were I to occupy in deliberation the time that yet remains to me for action. To-day, then, since very opportunely for the plan I have in view I have delivered my mind from every care..., I shall at last seriously and freely address myself to the general upheaval of all my former opinions (/144).

Note how the 'general upheaval' is described as 'action', by express contrast with 'deliberation'. But isn't 'the plan in view' paradigmatically an intellectual, a reflective, a ratiocinative one, to be executed by that fugitive from the bustle of the *vita activa*, the solitary thinker installed in his *poêle*?

Descartes' curious use of 'action' here is fragile clue. 'In view of his quick reversion to a more natural use of the term, too fragile a clue', it will be retorted. For instance, a few pages later, Descartes says that in the *Meditations* he is 'not considering the question of action, but only of knowledge' (/148), and as the curtain falls on the work he admits that 'the exigencies of action often oblige us to make up our minds before having leisure to examine matters carefully' (Meditation 6/199).

Nonetheless, Descartes' unusual opening usage is no momentary compositional lapse or local trope. Witness the interpolation into the approved French translation of the *Meditations* of a phrase expressly designed to illuminate what the term, as so used, purports — thus an interpolation which confirms the deliberateness of Descartes' initial formulation. The interpolated addition, omitted from the above excerpt, indicates that conditions are propitious for meditation because the meditator is 'agitated by no passions' (Meditation 1/144). Wrapped up in this Sophoclean sentiment we have what will prove to be a *technical* use of the dichotomy of action and passion, or activity and passivity, which will help to render Descartes' choice of words fully intelligible. (Those immediately sceptical of my thinking here on the grounds that the interpolation is not Descartes' own may consider the fact that his approval of the added phrase survives the *Meditations*: it reappears at 1.28 of *The Passions of the Soul*.) And, to

gesture in the direction of imminent developments, an examination of the *Discourse* reveals a more forthright connection between what Descartes here describes as passivity and the notion of probable knowledge, cases of which the principle of doubt aims to identify for purposes of intellectual prophylaxis, with the goal of scientific renovation on the horizon: 'since often enough in the actions of life [= actions in the normal sense, the sense in which meditation is accounted *inaction*] no delay is permissible,...we should follow the most probable' (Discourse 3/96).

Another literary feature of Descartes' writings — a more pervasive one this time — complements and helps to explain the reversal in the normal use of 'action'. Repeatedly in the central Cartesian texts we encounter figures of a thematically uniform kind. The task of the philosopher is likened to that of a solitary executor of a plan entirely of his own devising. Descartes' dominant simile here is architectural, though, for variety, artistic and legislative analogues are offered too.

By way of motivating the doubt, Descartes observes in Discourse 2 that 'buildings planned and carried out by one architect are usually more beautiful and better proportioned than those which many have tried to put in order and improve, making use of old walls which were built with other ends in view' (/87). Thematically similar remarks follow about the superiority of towns 'regularly laid out on a plain by a surveyor who is free to follow his own ideas' (/88) and of states with a 'constitution laid down by some [sc. some one] prudent legislator' (/ibid.). It is essential, Descartes holds, to make the sciences 'conform to the uniformity of a rational scheme' (/89), and so he must 'build on a foundation which is entirely my own' (/90).

Such figures dot the Cartesian *corpus*. Eudoxus, Descartes' spokesman in *The Search After Truth*, comments disparagingly on the artist who attempts piecemeal to improve a picture in which 'the figures [are] badly placed, and the proportions badly observed' (/312). He 'would have done much better, after having effaced by drawing over it a sponge all the features of the picture, to begin entirely over again rather than lose his time in correcting it' (/ibid.). In the *Meditations*, Descartes puts the method to work, rather than 'discourses' on it: 'inasmuch as it was desired that I should undertake this task by many

who were aware that I had cultivated a certain method... — I have thought that it was my duty...to make trial of it in the present matter' (Dedication/134-5). So although we encounter the cognate claim at the very start that one must 'build anew from the foundation' (Meditation 1/144), the frequency of the similes diminishes. But the idea of an unencumbered agent or actor informs the *Meditations*, and informs it in a philosophically more committal fashion, via the connection between the possibility of a finite subject's gaining scientific knowledge — i.e. 'certainties' — and his either putting himself into, or vicariously exploiting, the special position of the divinity *vis-à-vis* the world. As Descartes writes: 'He on whom I depend possesses in Himself all the great things towards which I aspire [and the ideas of which I find within myself], and that not indefinitely or potentially alone, but really' (Meditation 3/170). The finite subject's journey to science retraces, in an intellectual or meditative medium, God's implementation of his plan in creation. (Would it be utterly fanciful to see in the number of meditations an allusion to the six days of Biblical creation?) And the divine situation paradigmatically exhibits both features of the philosopher's task mentioned above, God being the lone and unfettered executor of a plan he devises free of external constraints or pressures, 'unagitated', we may appropriately say, by 'passions'. Indeed, the linkage between 'action' and the divine case appears explicitly in Discourse 5: 'the action by which He now preserves [the world] is just the same as that by which He at first created it' (/109).

Descartes' unusual use of 'action' is rendered *prima facie* intelligible by these facts. Meditation is an intellectual analogue of the divine situation — a kind of intellectual *imitatio Dei*. Thus, by association as it were, the term 'action' is appropriately applied to it. The divine agent is an actor in the fullest sense of the word: pre-eminently or paradigmatically. He executes a plan entirely of his own making; he is unconstrained by another's will; he isn't motivated by any parochial or partisan interests. Similarly, the meditator is a disinterested investigator, 'agitated by no passions', and hence is set 'freely to address' the renovation of his intellectual condition. By contrast with one whose intelligence-involving activities are determined or shaped

by 'the exigencies' (Meditation 6/199) of the daily grind the meditator's condition is 'active' rather than 'passive'. As Descartes puts it in the earlier *Rules*, his efforts do not 'depend upon an exercise and disposition of the body' (Rule 1/1). Thus, once more in an architectural idiom, those of us who undertake the characteristically Cartesian search for knowledge are 'to act in th[e] capacity [of architect] ourselves, and make a careful...design' (Discourse 3/95). Naturally enough then, the word 'design', with its strong divine overtones, is continually applied to the prospective scientist, e.g. at Discourse 2/90, with God being mentioned in the same breath. The meditator, because he is 'agitated by no passions', is 'fitted to execute [his] design' (Meditation 1/144).

On the evidence it would seem that the cognitive stance whose adoption is a necessary condition for gaining scientific knowledge is an 'active' one, fundamentally distinct from the 'passive' stance which delivers what Descartes classifies as 'probabilities' or 'uncertainties'. 'Science in its entirety is true and evident cognition' (Rule 2/3). As I suggested in the preliminary remarks of I.3, this implies that there is no graduated scale leading to the certain from the probable: reversing a contemporary sentiment, Descartes might therefore have said that science is not an extension of commonsense.

These implications will have to be worked out much more fully. But despite our present agnosticism about the merits of Descartes' case, the contrast between the Cartesian notion of probability and the standard one is clear. Ordinarily, nothing prevents a single proposition from counting as probable and as certain. It may be probable for an evidentially disadvantaged subject, certain for another subject whose evidential condition is superior; probable for a subject at one time, certain for that same subject at a later time just in case his fund of evidence is suitably augmented. A specific kind of *gradual improvement* in the cogniser's evidential position would ordinarily be deemed epistemologically sufficient to upgrade a belief from probable to certain. By contrast, nothing short of a *thoroughgoing transformation* of his cognitive stance could suffice for a 'passive' cogniser to come by Cartesian certainty. If we try hard, we can eke out a doctrinally neutral sense for the link between certainty and passivity: the

complacent subject who sits back passively rather than putting his beliefs actively to the test is unlikely to weed out the unworthy ones. But this must be, and is, a pale facsimile of the Cartesian connection. Were this Descartes' thought, the method of doubt would fall to objections of the kind commentators perennially raise.

'Probable' or 'uncertain' beliefs are, according to Descartes, the province of a scientifically deficient cognitive stance. Without need for additional assumptions, he can therefore move validly from the probability of any of them to the conclusion that they all are uncertain. What of the thesis of unified science, seen by Kenny and others as instrumental in Descartes' critique of the senses? To deny that Descartes regards science as unified would be to fly in the face of the texts. The belief in scientific knowledge as a single whole obviously figures prominently in the picturesque illustrations Descartes offers of the putatively superior mode of cognition — God acts in accordance with a comprehensive 'rational plan'; his product, like the town laid out by a single hand on a featureless plain, has a unified structure, each part being reciprocally adjusted to and harmonised with every other. But this holistic conception of knowledge as a web of tightly interrelated propositions is not being enlisted as a premise. The negative thrust of Descartes' argumentation, viz. that a 'passive' mode of cognition is constitutionally incapable of delivering certainties, can be evaluated apart from the contention that beliefs 'actively' gained mesh into a unified pattern, as is clearly indicated by the fact that we may possess no beliefs of the latter kind.

It remains to be seen how the Cartesian contrast between cognitive activity and cognitive passivity links with the denial that sense-perceptually grounded beliefs are suited for inclusion in the 'scientific' picture of things. The thesis of unified science, it will emerge, plays a demonstratively dispensable role so far as Descartes' negative result is concerned.

2. *Scientists and artists: unified science again*

In elaborating the clue to Descartes' reasoning supplied by the dichotomy of 'action' and 'passion' at the start of Meditation 1, I moved backwards through the *corpus*. On general methodological grounds, the propriety of calling upon an earlier and immature text to amplify a later, mature, one can be queried. But the detailed defense of the thesis that the sceptical content of the first Meditation bears only an oblique, consolidative, relation to the principle of doubt, and hence to results Descartes eventually arrives at by applying the principle, should hold the query at bay in the present case. Fully to clarify Descartes' meaning, one further step backwards will now be taken, to the *Rules*. Though a good deal of this early and uneven essay is far from Descartes' mind in the period of the *Meditations*, it does contain, in the form of a contrast between two sorts of characteristically human activity, the roots of that structural critique of the senses in default of which the accusation would succeed that Descartes' negative result in the latter work is attained only by delivering up hostages whose ransom leaves the position bankrupt.

In Rule 1 Descartes counterposes two kinds of intelligence-involving activities: the 'scientific' and the 'artistic'. The intellectual activities of those who operate scientifically 'entirely consist in the cognitive exercise of the mind' (/1); the efforts of artists 'depend upon an exercise and disposition of the body' (/ibid.). We will eventually see that this dichotomy links directly with, and thereby assists in explaining, the more mature distinction between an 'active' and a 'passive' mode of cognition.

It is far from clear what the adumbrated contrast comes to. It is especially unclear how knowledge of the world — 'scientific' or otherwise — could be thought to be achievable by what Descartes seems to represent as *exclusively* ratiocinative means, though this unclarity dogs our efforts to comprehend rationalism as a coherent, let alone serviceable, theory of knowledge. Nevertheless, the rough lines of connection to what ultimately eventuates in the *Meditation* are discernible. Descartes' contrast between cognition in science and cognition in the arts prefigures the distinction between 'certainty',

required by the meditator as a condition of belief-acceptance, and 'uncertainty' or 'probability', which is isolated under the rubric of PD. The genuineness of the prefigurement finds confirmation in Descartes' subsequent claim that he must 'reject all...merely probable knowledge' (Rule 2/3) in his quest for scientifically adequate results. As we shall soon see in detail, this last claim is tied to the demand that the prospective scientist scrupulously avoid approaching his subject-matter in the fashion of the artist. And, I repeat, Descartes' contrast in Rule 1 is entirely uninformed by the sceptical preoccupations of the *Meditations*: the early opposition between 'arts' and 'science' is structural — a fact which promises exegetical dividends in light of the inability of the sceptical argumentation of Meditation 1 to further Descartes' negative goal.

Why does Descartes insist that those who conceive of science on the model of the arts are thereby blocked from achieving genuinely scientific results? Why do their best efforts lead only to 'probabilities', at the expense of 'good understanding, or universal Wisdom' (Rule 1/2)?

As an example to the intending scientist of what he must strive to avoid, Descartes holds up the case of those, active in his day, who occupy themselves with 'the virtues of plants, the motions of stars, the transmutations of metals' (ibid./ibid.). Descartes isn't suggesting that these subject-matters are not themselves grist for the scientific mill; that their investigation falls exclusively to the 'artist'. The complaint is that the approach to these areas taken by those he alludes to is inappropriate; that it isn't a properly 'scientific' approach, and consequently that their results are compromised. This is borne out by the fact that in Discourse 5 Descartes claims to have succeeded where those he objects to here are thwarted, i.e. finally to have achieved properly scientific results in these very areas. Thus he points proudly to his own researches into the origins of the earth, planets, and more distant heavenly bodies; into 'the nature of the light which would be found in the sun and stars'; into 'how the metals came to be in the mines and the plants to grow in the fields'; into combustion, solidification, and liquefaction — the 'transformation' of bodies into 'ashes and smoke', and of ash into glass (/108-9).

Now what makes Descartes' work worthy, at last, of the denomination 'scientific'? He explains that he, alone among enquirers, doesn't proceed from 'any other principle than the infinite perfections of God' (/108). (Cp. Meditation 4: 'it seems to me that I now have before me a road which will lead us from the contemplation of the true God...to the knowledge of the other objects of the universe' (/172). Meditation 5: 'the certainty and truth of all knowledge depends alone on the knowledge of the true God' (/185). *Principles* 1.24: 'from the knowledge which we possess of His nature, we pass to an explanation of the things which He has created' (/229). Though the theological garb of the explanation shrouds its message, the relevant structural implication can be elicited by bringing the preceding words into contact with what Descartes writes in Rule 1.

Investigators who fail to follow a properly 'scientific' line — they 'erroneously compare the sciences...with the arts' (/1) — are party, as a result, to the mistaken belief that science comprises a multiplicity of essentially disparate topics which 'ought to be studied separately, each in isolation from all the rest' (/ibid.). Thus, again, those Descartes criticises pursue their specialist investigations of the sub-terrestrial realm (metals, mines), the sub-lunary terrestrial arena (plants, fields), and the superlunary sphere (sun, stars), without any concern for 'universal Wisdom' (/ibid.). By proceeding in a genuinely 'scientific' manner — or so Descartes informs us in the opaque sentence lately quoted from Discourse 5 — he has successfully overcome this objectionable and distortive compartmentalisation.

The contrast offered here by Descartes sets the unifying powers of scientific cognition against the 'fragmentation' of subject-matters in which an artistic approach results. The example brought verifies that the exercising polarity is indeed that of unity and multiplicity. Descartes observes that one who wishes to become a proficient harpist had best devote himself single-mindedly to that end. Although such a one might remain totally inept at 'agricultural operations' (/ibid.), that would not preclude his being accounted consummate in the musical field. Indeed, a concurrent attempt to develop a non-musical manual skill, e.g. at plowing, is apt to undermine his hard-

won dexterity with the instrument. By contrast, while a scientist might lack specialist expertise in this area or that, any such lacuna definitely detracts from rather than enhances his capability as a scientist. Though we should not forget that in the seventeenth century polymathy wasn't viewed as an unattainable ideal, it is quite true that limitations of time and energy make scientific specialisation unavoidable in practice: 'It is true as regards the experiments which may conduce to [scientific knowledge], that one man could not possibly accomplish all of them' (Discourse 6/126). But Descartes' point is that 'the knowing of one truth [does not] have an effect like that of the acquisition of one art and prevent us from finding out another' (Rule 1/1-2). Accordingly, even if specialisation is practically unavoidable, it is occasioned only by the mentioned limitations. Descartes' otherwise murky appeal to God points clearly to this conclusion — God being free, *ex hypothesi*, from the limitations under which men labour; limitations which lead them, willy-nilly, to specialisation in science. I shall eventually show that Descartes' reference to God here plays an essential role in his positive position. As a stop-gap until then, those unhappy with the theological allusion can be placated by pointing out that Descartes could informally achieve much the same effect at this stage via the observation that while the pooled knowledge of a group of scientific specialists or research team is better than that of any one of them — 'many can see more than a single man' (Discourse 6/123) — the idea of a joint harp-playing effort is absurd.

A link is thus forged by Descartes between the dependence of artistic prowess on 'an exercise and disposition of the body' and the genuine plurality of the arts. Also, a conception of the sciences as essentially multiple, rather than multiple because of the unfinished state of knowledge, is condemned. But though both claims revolve about the formal dichotomy of unity and plurality or multiplicity, and though Descartes writes as if an internal connection exists between them, the reader would have to be excused for failing as yet to see the light. And indeed, I have myself been somewhat lax in describing the Cartesian position, specifically in saying, without reservation, that Descartes' objection to scientists who fail to heed his

counsel is that they take their cue from the artist. But isn't it one thing to follow an artistic line, quite possibly another wholly different thing not to follow a scientific line? If so, what justifies Descartes' equation of 'artistic' and 'non-scientific', i.e. his treatment of 'artistic' and 'scientific' not only as exclusive but also as exhaustive alternatives?

The difficulty resolves into two parts. First, how does Descartes' (acceptable) claim that the arts constitute a genuine plurality — and hence that artistic specialisation is not specialisation *faute de mieux* — support his contention that scientific knowledge is of a piece? May not the arts and the sciences, perhaps for unconnected reasons, constitute genuine pluralities? Second, while the activities of the harpist or tiller clearly 'depend upon an exercise and disposition of the body', on what grounds can the same, or indeed anything remotely similar, be said of the non-Cartesian scientists who investigate 'the virtues of plants, the motions of stars, the transmutations of metals'? But Descartes specifically criticises the latter for emulating the artist.

It is quite true that the thesis of unified science cannot validly be rested on (i) the fact of artistic plurality and (ii) the non-identity of arts and science: these are perfectly compatible with a real multiplicity in the scientific arena. But attention to the texts reveals that Descartes does not perpetrate the fraudulent transition. Though he writes in Rule 1 that 'all the sciences are...interconnected' (/2), the proposition has a transparently *regulative* cast. Why 'must' (/ibid.) we believe that science is unified? Because such a belief renders our scientific task 'much easier' (/ibid.). And indeed, for the following reason, shouldn't Descartes vocally dissociate himself in principle from the logically objectionable transition? In light of the sharp ontological dualism of his mature metaphysical stand, it would be quite natural for him to allow the science of mind to be as distinct from the science of body as the mental is from the corporeal, i.e. totally distinct. At Rule 6 (/21), we in fact find Descartes sketching how the (scientific) approach he advocates can effectively establish this root *multiplicity*. And plainly, it would be a mistake to argue that science is unified because a properly scientific approach establishes the sharp diversity in being. One might as well argue that divorce

proceedings, by legally dis-uniting a couple, really show them to be indissolubly bound together.¹

I do not deny that Descartes inclines towards a thesis of unified science. But his critical point is separable from any iron-clad commitment to it, viz. the point that *the kind of multiplicity* which characterises the arts does not obtain in respect of the special sciences. If, in other words, a theorist wishes to establish that science is not fragmented, he must have more to enter in testimony than the genuine diversity of the arts.

While disposing of the first part of the difficulty, this leaves the second part intact. Descartes lays the blame for an illicit and damaging fragmentation of knowledge about the world into specialised compartments on a failure of investigators to observe the distinction between the character of scientific cognition and the character of intelligent activity in the arts. The following substantive questions are still orphans of response. (A) What is the mechanism of fragmentation in the arts? (B) How does the mechanism figure in and affect the activities of those to whose scientific results Descartes takes exception? In what sense do the latter err *because* they emulate the artist?

3. *Fragmentation and the senses: a structural identity*

Descartes comments on the mechanism of fragmentation in this passage:

take our investigations of those sciences conducive to the conveniences of life.... There we may indeed expect to receive the legitimate fruits of scientific inquiry; but if, in the course of our study, we think of them, they frequently cause us to omit many facts which are necessary to the

1. There is a reason for Descartes' failure explicitly to dissociate himself from the transition. Given that God acts in accordance with 'a rational plan', it would seem that, from the divine point of vantage, the character of the mental realm and of the material realm should be mutually adjusted. This is one point on which Descartes is taken up by his non-dualistic successors.

understanding of other matters, because they seem to be either of slight value or of little interest (Rule 1/2).

A paraphrase to clear up the appositional log-jam is in order. Descartes is distinguishing a properly scientific approach to a subject-matter from an approach, which may be called 'applied', aimed at specific results. His warning is that if in the course of pure scientific activity the enquirer allows himself to be guided by the desire for such results, he will be driven, willy-nilly, to be distortively selective *vis-à-vis* the character of the subject-matter.

We are again in the orbit of the unity/plurality dichotomy. Those who 'omit' facts 'necessary to the understanding of other matters' are, we can agree, fragmenting what may in itself be an integral, a seamless or internally unified, subject. However, Descartes is more helpfully voluble here than before. He tells us that such omissions, and hence such fragmentation, will occur if we are actuated by particular interests, values, aims, purposes, or goals: 'there is nothing more prone to turning us aside from the correct way of seeking out truth than this directing of our inquiries, not towards their general end, but towards certain special investigations' (ibid./ibid.).

The compartmentalisation of an integral subject-matter is then a function of specific interests, goals, values, aims, etc. This provides a deeper understanding of the preceding results. The harpist develops a characteristic dexterity to the exclusion of other motor skills, indeed even at their expense, with the aim of producing a certain sound. Because of the value placed on that product he bends his efforts to achieving a mastery of the instrument, a mastery which prevents him from becoming adept at handling the plow.

A crude answer to (A) is now in hand. The arts are genuinely multiple because they are individuated by reference to goals and purposes. Different arts may therefore involve the same kinds of objects — when these are exploited in each for different ends — and different kinds of objects may fall within the sphere of activity of a single artist — when he exploits these in furtherance of a single purpose. By contrast, the (pure) scientist approaches his subject-matter in a spirit entirely different. If pressed, one can assign a goal or purpose even to him: the achievement of 'good understanding, or uni-

versal Wisdom' (ibid./ibid.); 'that pleasure which is found in the contemplation of truth' (ibid./ibid.); 'to increase the natural light of reason' (ibid./ibid.). But these are 'goals' in a maximally attenuated sense, since to say that the scientist does what he does in pursuit of wisdom or for the sublime intellectual satisfaction of beholding the lustrous countenance of truth is really to deny that he does it for the sake of some definite, distinctive, purpose or goal.

How does this response to (A) assist in answering (B)? It isn't hard to generalise the above description of the arts to the *applied* sciences, for the difference between artist and applied scientist takes off from a more basic similarity: both are actuated by interests, purposes, goals. (Thus, in a rather ugly, but appropriate, phrase, one frequently hears talk nowadays of 'state of the art technology'.) While the goal of the artist, virtuoso ability on the harp say, is pursued for its proximate product, the production of a certain quality of sound, that of the applied scientist is sought for some more distant reason. One who develops a technique for alloying metals would do so in aid of some end, like effectiveness in battle, which is facilitated by the product. In both cases a goal or purpose — a 'particular end' (ibid./ibid.) — defines or individuates, and thus results in the kind of differential weighting of the facts that Descartes thinks to be ruinous in science proper.

So far so good. But the investigators Descartes seeks to correct in the name of science proper are not necessarily interested in the solution of technical problems. What is it about their procedures that draws Descartes' fire? More specifically, how does the preceding account of the nature of the arts and the applied sciences reapply here?

Are we correct in assuming that Descartes believes his objections to reapply? We are, obviously. Otherwise, his explanation of the plurality of the arts would come unstuck from the criticism he offers of those in his day who viewed themselves and were viewed by the community at large as genuine scientists on the grounds that they fail to win through to 'universal Wisdom'. Our task is therefore to generalise what Descartes says of the artist and of the applied scientists so that the result will bear critically on those enquirers into

the world who cannot fairly be classed either as artists or as applied scientists and with whose views Descartes is dissatisfied. Descartes' criticism here mustn't reduce to his mere dissatisfaction with the substance of these views. Like logicians, even Cartesian scientists are apt to disagree among themselves. So the point has got to be that the objectionable views are not of the right kind; that they miss the mark because they are produced by a mistaken procedure, an inappropriate style of cognition.

The generalisation sought must satisfy three conditions. (1) In the following sense, it has to base itself squarely on Descartes' claim that the activities of the artist and the applied scientist 'depend upon an exercise and disposition of the body'. The generalisation cannot rise to a level of abstraction on which the literal application of the quoted description is restricted to the cases of the artist and the applied scientist. (2) Complementarily, the point, once generalised, must provide a viable ground for pressing the charge that the procedures employed by those Descartes reproves result in distortive fragmentation of a subject-matter. (3) Also, it has to follow from the generalised point that sense-based beliefs run afoul of the condition of rational acceptance; that they count for some structural or constitutional reason as no more than 'probable', and hence fall short of scientific status. Can a satisfactory generalisation, at once text-based and text-respecting, be found?

Signs of our quarry are faintly visible in the contrast Descartes adumbrates in Rule 3 between 'intuition' — 'the conception which an unclouded mind gives us so readily and distinctly that we are wholly freed from doubt about that which we understand' (/7) — and 'the fluctuating testimony of the senses' (/ibid.). Since the contrast immediately follows a slighting reference to 'obscure and ill-comprehended theories, at which [the learned] have arrived merely by probable conjecture' (/6-7), Descartes is therefore saying that those misguided scientists who end up reposing trust in probabilities do so because they fail to cognise 'intuitively', relying instead on 'sense-testimony'. Are there any links between *this* contrast and the contrast of 'artistic' and 'scientific' intellectual activities in Rule 1? Does what

Descartes calls 'the fluctuating testimony of the senses' point towards the desired generalisation?

Before defending an affirmative answer, let me pause for an orienting comment. My search for structural data was prompted by the fact that the sceptical materials of Meditation 1 do not by themselves challenge the conditional proposition. But note how, in the lines quoted above, Descartes describes those who defer to 'the testimony of the senses' as contenting themselves willy-nilly with 'probable' results, and note that the description is applied quite apart from any asseverations about deception, illusion, dreaming, and so on. To the extent that the earlier text can legitimately be brought to bear in amplifying the later one, my broad claim about the argumentational architecture of the first meditation is reconfirmed. And once, particularly in respect of the final condition of adequacy, the desired generalisation of what Descartes says in the *Rules* is achieved, i.e. once his remarks in the *Rules* are connected explanatorily to the negative thesis about sense-perceptual cognition in the *Meditations*, the claim will have been fully secured.

Keeping this in mind, we return to the main line of discussion. The issue immediately outstanding is whether Descartes' claim that defective or 'probable' results are reached by those who rely on the senses has any real links with his account of the 'artistic' mode of activity. The positive answer desired emerges if we scrutinise Descartes' comments about the testimony of the senses.

What is the force of the assertion that sense-experience supplies 'fluctuating' testimony about the world? The answer is hinted at by the remark in the fourth paragraph of the opening Meditation that 'the senses sometimes deceive us concerning things which are hardly perceptible, or very far away' (/145). (In addition to the unusual use of 'action' in the work's first paragraph, this constitutes the second glimpse alluded to of a structural strain in Descartes' reasoning.) It is an internal or structural characteristic of sense-experience — like Descartes, I have the visual mode of perception in mind — that the cognising subject is externally placed *vis-à-vis* the object experienced. The object, to adapt Descartes' wording, may be 'very far away'; it may be 'close by'; it may be 'clearly in view'; it may be 'hardly

perceptible'. *All these possibilities are open even if the senses are in perfect working order and the conditions of perception — physiologically, psychologically, and optically — ideal.* And plainly, the self-same object may stand simultaneously in all these relations to different perceivers.

The discussion of the plurality of the arts comes into its own here, helping us to home in on the precise structural content of these uncontentious facts. Artistic plurality was explained by noting that the arts are individuated in terms of goals, purposes, values, interests, etc. *This gives a formal parallel with the relational structure of the perceptual nexus.* It does so, moreover, in a way which explains why Descartes' acceptance of artistic plurality is not matched by an equal tolerance of specialisation in science.

The artist handles his subject-matter in some one way, to the exclusion of other ways, because his approach to the subject-matter is dominated by a specific purpose. Solely by examining the subject-matter, it could not therefore be decided what his art consists in. Formally, we may put:

$$A = G(s)$$

The artist's purpose or goal G takes his subject-matter s into the activity A that individuates his art. The goal of producing a sound of a specific quality determines that the harpist will strive to develop a characteristic dexterity on his instrument. Similarly, the sense-perceptual cogniser's vantage point V *vis-à-vis* the perceived object o determines R , the representative content of his conscious state. Formally:

$$R = V(o)$$

Since in both cases a factor — G , V — *extraneous* to the subject-matter — s , o — plays a selective role, neither A nor R can be determined solely by examination, however minute, of s or o . It is in this formal sense that the mode of cognition of a sense-perceptual cogniser qualifies as 'artistic' in nature.

The following vital difference separates the cases. No *criticism* is implied by the fact that an artist's art is defined essentially by reference to a selective factor external to his subject-matter: this is what art is. But, for Descartes, the fact that perceptual testimony is a

function of a selective factor counts against the testimony's adequacy.

There is no pressure on us immediately to decide whether sense can be made in the perceptual case of something better, viz. a mode of cognition for which R is brought into co-incidence with o. Though this is a crucial requirement for Descartes, the important point here and now is that the *descriptive* content of his negative thesis — that perceptual cognition is structurally selective, and hence yields less than a full representation of an object so cognised — is arguably correct.

4. *Sense uncertainty*

A generalisation of Descartes' account of 'artistic' cognition was sought which would successfully explain the exception he takes to the procedures employed, and hence to the results reached, by contemporary non-Cartesian enquirers into the world. It was requested of the generalisation that it make sense of the contention that the latter go astray *because* their approach is 'artistic' in nature, and not merely chastise them question-beggingly for failing to convert to Cartesianism. The generalisation was also asked to perform a further service: to provide insight into Descartes' structural critique of sense-employing cognition in the *Meditations*. The desired result is implicit in the sketchy remarks concluded just above. By elaborating, a point on which the need for more instruction was felt with especial poignancy will be amplified, viz. the relevance of Descartes' characterisation of artistic activities as depending on 'an exercise and disposition of the body' to the evaluation of the senses as instruments for achieving knowledge. But before filling in the sketch, I want to show that Descartes' mature views about certainty and uncertainty or probability indeed take up where the discussion in the *Rules* (prematurely therefore) breaks off.

Permit me to enunciate the large point in advance. Descartes' major claim in the *Rules* is that scientific knowledge will be forfeited if the subject's mode of cognition, because it is selective *vis-à-vis* the object cognised, results in a fragmented portrayal of the object's

unitary character. When we examine what Descartes has to say about certainty in his mature period, it comes to light that the uncertainty of sense-based beliefs — and hence their rational unacceptability in accordance with PD — is understood *ab initio* by reference to the structurally unavoidable selectivity of sense-perceptual representation. There are not, in short, two distinct and logically consecutive steps in Descartes' thinking: first, the neutral definition of 'certainty'; second, the logically posterior assessment of whether or not sense-based beliefs qualify as certain. Rather, Cartesian 'certainty' is expressly keyed to what sense-based beliefs are not.

Examine these characteristic Cartesian comments about certain knowledge. Descartes explains in Discourse 2 that judgements are certain if I 'accept in them nothing more than what was presented to my mind so clearly and distinctly that I could have no occasion to doubt it' (/92). Those beliefs which '*may [not] be brought within the sphere of the doubtful*' are entitled 'certain' at the start of Meditation 1 (/144). In Meditation 5 a belief grounded in such a fashion that 'no contrary reason can be brought forward which could ever cause me to doubt of its truth' (/184) is said to be certain. In *Replies* 2 a cogniser is denied the right to claim certainty so long as '[a doubt] may come up' (/39). And at various places — e.g. *Replies* 2/41, *Replies* 6/145 — Descartes conjoins 'certainty' with 'immutability'.

At the intersection of these overlapping formulations is the point that a belief is certain providing it is so based that there could be no subsequent development which would lead the (rational) cogniser's opinion to waver in the slightest. Beliefs which fill the bill are quite naturally described as 'irrevisable'. An analytic formulation of irrevisability, brought to bear by its author on the Cartesian case, follows.²

A proposition *p* is irrevisable for a subject *S* at a time *t* if and only if (i) *S* is justified in believing *p* at *t* on the basis of some set of evidential propositions, *e*, and (ii) there is no time *t'* and possible *e'* such that *t'* is later than *t*, *e* is a subset of *e'*, and *e'* fails to justify *S* in believing *p* at *t'*.

2. I am simplifying J. Tlumak's formulation in 'Certainty and Cartesian Method', in M. Hooker, ed., *Descartes: Critical and Interpretive Essays* (Baltimore and London: The Johns-Hopkins University Press, 1978), p. 46.

Obviously, sponsors of this analysis (and, *mutatis mutandis*, of its variants) assume the Cartesian distinction between revisable and irrevisable beliefs to be a distinction among beliefs based on data of a uniform kind. By focussing attention on Descartes' differentiation of 'active' from 'passive' and of 'scientific' from 'artistic' cognition, I have been toiling to explain that the assumption is exegetically indefensible. Descartes would not argue, in the conditional mode, that a belief sense-perceptually acquired is revisable, i.e. uncertain, if the evidence for it can be augmented so that the believer's justification is weakened or undermined — a pattern of argument which would require him to consider each belief in a case-by-case fashion to see whether or not countervailing evidence does in fact come to light: 'an endless undertaking' (Meditation 1/145). Rather, he would argue, categorically, that because the belief is sense-based, the evidence for it is in principle capable of being augmented; sense-perceptual evidence is by its very nature evidence-of-an-augmentable-kind, and hence a belief acquired perceptually is by its very nature uncertain.

It is more than merely interesting to note that the analytic rendering of irrevisability lends itself to exploitation in support of this very point. To claim that a belief about some (objective) state of affairs engendered at a specific time is certain, i.e. irrevisable, just in case no assailing evidence could later come to light is to imply that the evidence for the belief is all-in at that time. (I speak of course of *direct* evidence. Indirect evidence may always come to light later.) But what could this mean if not that there is no temporal or spatial vantage point displaced from that very spatio-temporal vantage point at which the belief is acquired and from which what the belief expresses could relevantly be examined or checked? (Note how the slightly picturesque notions of vantage point and displacement are being enlisted to give body to what is expressed by the rather aseptic analytic phrase 'later time and additional evidence'.) Doesn't this in turn mean that the initial evidential basis for the belief is non-selective, non-fragmentary? If the evidence is all-in, then *all of it* is in. Doesn't it follow that no sense-perceptually grounded belief about the world could be certain? For if it isn't part of what we immediately

understand by 'acquiring a belief sense-perceptually' that, for example, a multiplicity of sense-perceiving subjects could directly acquire the belief at one and the same time, then it surely is a not too distant consequence of what our immediate understanding of the phrase involves. If so, the evidential basis of any one of the subjects could not be complete or non-fragmentary. (Contrast this with the case of a mental state like pain. There is always one subject — the subject in pain — whose position *vis-à-vis* the content of the belief that pain is felt is evidentially superior to the position of any other subject who may subscribe to the belief.)

My reason for saying that this is more than merely interesting should be sufficiently plain. Revisability, as analytically defined, mirrors the very structure of that kind of cognition which delivers what Descartes classifies as uncertainties or probabilities. *Pace* the bulk of interpreters, there are not two steps here: first, to define revisability in a cognition-theoretically neutral way; second, to ask whether beliefs gained by the perceptual cogniser are revisable. This reverses the flow of Descartes' thinking.

To facilitate the discussion which is to come, let me clothe the above claims about revisability in a more formal dress. For Descartes, a subject's cognitive condition about some truth-evaluable matter is one of 'uncertainty' when there are, for him, meaningful counterfactual possibilities of gaining direct evidence bearing on that matter. In other words, what the subject believes counts as 'uncertain' when there are positions *vis-à-vis* the state of affairs represented by the proposition which expresses the belief's content, different from the position in which the subject happens to be when he acquires the belief, at which additional evidence no less (and no more) relevant to the truth-evaluation of the proposition than the evidence he in fact relies upon can be (and, for him, could have been) acquired. Now it follows directly from the relationality of the perceptual nexus that, no matter what perceiving subject you care to choose, there are always positions distinct from his at which evidence about an object or state of affairs can be garnered, evidence as relevant to the truth-evaluation of the proposition he believes as the evidence he in fact relies upon. That it follows is illustrated, again, by the fact that no

one among a group of subjects all of whom directly acquire a belief about the world by using their senses may have evidence which is superior to that of any other — albeit each of them would unreflectively be said to be in an optimal perceptual position; in as good a perceptual position *vis-à-vis* what the proposition expresses as he could be. This state of affairs is exemplified every time a number of perfectly-sighted subjects, sitting around a table in a well-lighted room, acquire the belief that there is a potted plant on the table: though each subject has the best (perceptual) evidence he could want, the evidence he has differs from that of any other.

We return to consider whether a satisfactory generalisation has been supplied. Are the three conditions of adequacy satisfied?

(1) The generalisation was required to extend Descartes' claim that the intellectual activities of the non-scientist 'depend upon an exercise and disposition of the body' beyond the cases of the artist and the applied scientist without excessively attenuating the sense of the phrase. Since the content of sense-testimony is quite literally a function of the body, the condition is met. In terms of the formalities of section 3, the factor V gives expression to the role played by the sense-perceiver's body — by its dispositions and movements — in determining the representative content of his conscious state. For the sake of those who regard the link here as forced, it is worth pointing to texts where Descartes uses the language of bodily dependence to explain the constitutional ability of the senses to lead the cognising subject astray. During the physiological speculations of Meditation 6, to give one example, he observes that the 'impressions' received by the subject are as they are because of how 'the body [is] disposed' (/196). For this reason a large object at a distance and a small one in the vicinity may have the same visual character. And if the leap from the *Rules* to the *Meditations* still seems truth-defying, it may be noted that the point made in the early work appears again in the transitional *Discourse*. At Rule 12 Descartes remarks that 'all our external senses...are part of the body' (/36). The bodily dependence is cashed directly in terms of the notion of passivity. Sense-based cognition is 'properly speaking...in virtue of passivity alone' (/ibid.). Similarly,

Descartes' wording in Discourse 5 implies synonymy between 'senses' and 'external passions' (/115).

(2) As requested, the generalisation does justice to the fact of fragmentation. The artist's specific interest G results in a differential weighting of the features of the subject-matter s : even though s is held constant, a change in G will, that is, induce a change in A . *Mutatis mutandis*, the fact that the sense-perceiver stands in one relation from among a large set of possible, cognitively equipollent, perceptual relations V to an object o results in the promotion of certain of the latter's features over others: though o remains constant, a shift in V will, here as before, yield a corresponding alteration in R . In what can now be appreciated to be Descartes' very apt word, sense-perceptual testimony is by its nature 'fluctuating'. And, as I mentioned, it is at least plausible to say that the variability of R is in this case distortive *vis-à-vis* the invariant character of o .

(3) Finally, the generalisation was asked to make sense of Descartes' claim that perceptual testimony betrays the scientist's needs. This is accomplished by the link described between uncertainty and perceptual selectivity.

5. *The non-realist semantics of probabilities*

To understand Descartes' view that a doxastic policy informed by PD requires withholding belief from standard factual propositions, it is vital to recognise that the uncertainty Descartes associates with such propositions is truth-involving. Descartes' structural analysis of perceptual cognition, as just retrieved, establishes that even under ideal circumstances the subject's belief in any proposition of this kind is based on partial or fragmentary evidence. It should now be clear that the evaluation of these propositions as untrue, which flows on my construal from the denial that they can be known 'with complete certainty', does not imply them to be false in the normal sense.³

3. To be sure, some of these propositions may be (known to be) false, viz. those disconfirmed by the senses. In formulating PD, Descartes distinguishes matters which

Rather, they are propositions which cannot be assigned the truth value true. Descartes' own word here is 'probable'. But since this word is also unstable, let us agree to say that the mentioned propositions are *intrinsically probable*.

Once and for all to snuff out the natural urge to maintain that the evidential incompleteness which Descartes charges against the senses only has practical effects on truth evaluation, and is therefore compatible with the truth of standard factual propositions, it is necessary on Descartes' behalf to supply a fuller account of these propositions on which the mentioned partiality of evidence works out as a partiality of meaning, i.e. works out as having meaning-theoretic effects on truth value. Though I am quite conscious of the danger of anachronism in the retroactivation of modern meaning-theoretic materials here, I nevertheless believe that the essentials of just the account Descartes requires are available in some recent work by M. Dummett.⁴ In fact, the difficulties in Descartes' position which are set in relief when his views are reconstituted in Dummett's terms — difficulties to be glimpsed in the next section — are, I shall argue, the very difficulties he fails to cope with.

The key is Dummett's distinction between reductive and non-reductive forms of anti-realism about material objects; or, in meaning-theoretic rather than ontological terms, the distinction between reductive and non-reductive forms of anti-realism about material objects propositions. In the eyes of the theorist of meaning, the phenomenalist is a reducer, maintaining that propositions about material things can be translated without cognitive impoverishment into (sets of) sense-datum propositions. We saw that Descartes' reasoning in Meditation 1 is not phenomenalist in character either as concerns SA or as concerns PD. So in the absence of a non-reductionist anti-realist option to call upon, there will seem no

are 'not entirely certain' from those which are 'manifestly...false' (Meditation 1/145). Since agreement can be assumed that propositions known to be false are rationally unacceptable, I am concentrating attention on cases which fall under the first phrase but not the second. So does Descartes.

4. 'Realism', essay 10 in *Truth and Other Enigmas* (London: Duckworth, 1978).

alternative from a meaning-theoretic perspective but to represent Descartes as a realist about the propositional elements of standard material object discourse. We are by now well-versed in the undesirable consequences of such a characterisation. One who sees Descartes as a realist here will be driven, like it or not, to construe PD via the truth-neutral notion of uncertainty. He will be driven to this for the obvious reason that if Descartes is a realist — believing a material object claim to have whatever truth value it has quite apart from the experiencing subject's ability to determine it — then he can be described only on pain of outright inconsistency as maintaining that the rational subject is obliged to reject each such proposition because of its untruth. Immediately, an insuperable obstacle blocks the way towards understanding why Descartes thinks himself to be warranted in asserting CP*. If material object propositions might be true, then his refusal to allow them entry to a properly 'scientific' description of reality must be due to dogmatic prejudice — e.g. (as is frequently alleged) to an unargued preference for a mathematical style of representation.

The obstruction is removed once the non-reductionist anti-realist option is advanced. Reductionism counts according to Dummett as 'an intrusive feature of the anti-realist position',⁵ the hallmark of anti-realism about material object propositions being advocacy of the view that an asserted proposition of this kind cannot categorically be said in advance to be either true or false, and may under certain conditions have to be evaluated as neither. An examination of why the anti-realist plumps for this line will reveal the Cartesian reasoning displayed above.

For a realist about material object propositions, meaning is given by specifying the conditions under which a proposition of the class is true. Meaning is tied by the anti-realist not to truth-conditions but to conditions of assertion: to explain meaning one specifies the evidential conditions which fully justify a speaker in asserting the proposition in question. Suppose I state 'The table in the next room is blue' in the absence not only of direct observational evidence (the

5. 'Realism', p. 157.

walls are opaque) but also of such indirect evidence as might be supplied me by the observation-based testimony of a subject better situated. On the anti-realist's understanding the proposition's assertion will be indefeasible just in case I am fully justified in asserting a conditional like 'If I were in the next room I would see a blue table'. Now the anti-realist is obviously barred from holding that what justifies the conditional's assertion is the presence of a blue table on the far side of the partition; this would amount to abdicating anti-realism by tying meaning to truth-conditions as distinct from conditions of assertion. Since in the evidential circumstances described the conditional must be assessed by him as lacking a definite truth value, the same therefore has to be said about the asserted proposition.

With a single change, this transforms into Descartes' negative thesis about standard factual propositions — the thesis expressed via CP* and via the claim that PD rules against the acceptance of these propositions because of their truth-involving uncertainty. Whereas, for the anti-realist introduced, evidential conditions exist under which a material object proposition may justifiably be asserted — viz. those conditions of observation which would unreflectively be accounted 'optimal' — Descartes holds that because of the very structure of the nexus of sense-perception *sense-perceptual evidential conditions fall short in principle of ever fully justifying the assertion of any proposition of the class*. Even when by our unreflective canons the subject's evidential condition is as good as it could be, he is still not in possession of the evidential data required for justifiably asserting the proposition in a wholly unqualified way. The upshot is plain. No asserted factual proposition about the world whose meaning is specified in terms of sense-perceptual evidence ever counts as more than probable. Assuming that the meanings of such propositions, if specified in sense-perceptual terms, cannot be specified in some other way, it follows that all asserted propositions of this kind are, in the phrase promulgated above, intrinsically probable.

The formula ' $R = V(o)$ ' can be pressed into service again to clarify the upshot. That even the optimally-placed sense-perceiving

subject must, qua sense-perceiver, take up one vantage point V as distinct from and necessarily to the exclusion of other possible and équally advantageous vantage points, implies that his evidence concerning the state of affairs o about which he acquires a belief (makes an assertion) is always partial. The representative content R of his state of consciousness gives no more than a fragmentary picture of the state of affairs.

Reconsider our group of perfectly-sighted perceivers, each of whom acquires the belief, and is therefore prepared if called upon to assert, that there is a potted plant on the table. Because the evidence of any one of the group differs from the evidence of any other — a result of the fact that each occupies a different vantage point V with respect to the relevant object o — and given that no one member of the group possesses evidence superior to that of any of his fellows, then it seems to follow, notwithstanding that the conditions of belief-acquisition would unreflectively be accounted optimal, that the evidential basis of each falls short, and hence that the proposition, when asserted, must be assessed as no more than probable.

That this genuinely echoes Descartes' thinking will be clear if we again peruse the kinds of claim he makes about uncertainty. One who relies on his senses, Descartes tells us, acquires knowledge which is 'imperfect'; the object is never 'completely known' (Rule 2/3) by a subject whose basic evidence is sense-evidence. And, Descartes adds, 'we cannot attain to a perfect knowledge in any such case of probable opinion' (ibid./ibid.). Consider also how, in *The Search After Truth*, a work closer than the *Rules* in its texture and inflections to the *Meditations*, Descartes pokes fun at Polyander, the commonsensical 'everyman', by making him say this: 'I am well aware that the senses sometimes deceive...; [e.g.] when they are too far from the object...; and in general when they do not act freely according to the constitution of their nature' (/313). How exactly does the 'in general' claim take in the earlier, specific, one? Would Polyander have eyes which operate to detect objects only at a distance of, say, eighteen inches? Descartes' point is that the senses are deceptive even when they function naturally, the problem affecting them arising from their very constitution and mode of operation.

6. Reconciling realism and anti-realism

To judge by the recent literature, an anti-realist position about material object discourse is a live option today: the debate has only begun to be joined, and the situation in the field is one of lively disagreement. To the extent that Descartes' negative appraisal of the deliverances of the senses lends itself to reconstitution in these terms, it continues therefore to merit our analytic attention. If allowance is made for Descartes' (to us archaic) style of discussion, his treatment can even in fact be assessed approvingly for the depth it achieves. But difficulties of interpretation and evaluation alike arise because Descartes' structural account of perceptual cognition is wrapped up in a wider realist package. So far as *bona fide* scientific knowledge is concerned, Descartes' sympathies are unreservedly realist in character.

Preparatory to treating Descartes' positive conception of knowledge, I want to turn aside an objection that is sure to be pressed, viz. that if the preceding construal of Descartes' attitude to ordinary factual propositions is accepted, then full-blooded Cartesianism has to be viewed as an incoherent mixture of anti-realism and realism about factual discourse. While realist and anti-realist elements are indeed combined by Descartes in an exceedingly volatile way, I shall argue that his position isn't internally incoherent on this score. The problems which arise are problems with Cartesian realism; they do not affect the negative critique mounted against the senses. The problems are in other words problems which *specifically* affect Descartes' positive, realist, conception of things.

Transcribed into our modern terms, Descartes' contention is that because the semantics of standard factual propositions are non-realist, these propositions are scientifically deficient. Properly scientific knowledge of the world requires that the relevant propositions be known with certainty, but the augmentability-in-principle of the direct sense-evidence for a standard factual claim leaves it ever uncertain or 'probable'. It may however seem that what Descartes labels 'certain knowledge' and what he describes as 'probable knowledge' are closely related species of a single genus, or even minor variants of

a single species. This will appear to be the case if certain knowledge is represented as capable of being reached by extrapolating from a base of probable knowledge — a possibility which presupposes that the two are of the same kind. Reconsider the position of the sense-employing cogniser *vis-à-vis* an object. Because, qua sense-perceiver, he is stationed at one place from among many which might be taken in relation to the object, his evidence about it is fragmentary. Doesn't it follow that by successively occupying the various possible places in a systematic way he could totalise the evidential fragments up to coincidence with the object's character? In a more sophisticated terminology, doesn't it follow that the optimal evidential condition can be described as the limit of the inadequate evidential condition?

The severe problem that would confront Descartes were this his considered view concerns the *relation* between the scientifically inadequate conception of reality laid up in standard factual propositions, on the one hand, and what Descartes would allow into full-fledged science, on the other. Descartes is here said to maintain that the real meaning of a standard factual proposition about the world is given by what would appear in a properly scientific representation of that reality which the standard proposition describes. This is inconsistent with the thesis that the propositions comprising this mode of representation are intrinsically probable. If they are intrinsically probable — if their meaning-specifications are such that no assertion of any of them can definitely be assigned the truth value true — then it cannot consistently be said that representations susceptible of definite truth evaluation as true give their meaning.

The thesis that standard factual propositions are intrinsically probable is not stated by Descartes in so many words; I have teased it out of a number of passages each of which says something less. So the fact that the constellation just described is inconsistent might be regarded as a flimsy basis for refusing to pin it on him. The attribution ought however to be resisted for a more compelling reason. If Descartes did indeed maintain that the real meaning of a standard factual proposition is given by what would appear in science, then the argument for the unacceptability of normal beliefs would be a fatality. Crucial to the validity of that argument is the claim that a

proposition expressing the representative content of a perceptually acquired belief is uncertain in the truth-involving sense, i.e. is intrinsically probable, *because of its very nature*. Should we allow ourselves to suppose that these propositions aren't sharply separated from representations which pass scientific muster, one of two things follows. Either the 'uncertainty' of the former transposes to and contaminates the latter, or else the rejection of the former on the grounds of 'uncertainty' loses its justification. Clearly, then, there must be enough difference between propositions of a standard factual type and representations of the type suitable for science to enable Descartes validly to argue for the differential untruth of all of the former.

Whatever the instabilities in Descartes' position, it therefore seems plain to me that he recognises that scientific modes of representation cannot — and consequently recognises that they do not — discipline non-scientific modes by revealing the realist basis of the latter, where by 'reveal' is meant 'disclose what is implicitly there from the start'. Once granted, this sets one of Descartes' most basic difficulties in sharp relief. If scientific modes of representation do not, in the explained sense, 'reveal' the meaning of non-scientific modes, what obligation binds the rational subject to replace the latter by the former? Descartes states that perfect knowledge is impossible where there is probable opinion. What 'imperfection' in our ordinary beliefs is made good by perfect knowledge? How exactly could the one mode of cognition serve to discipline the other if they differ in kind? A table is one kind of thing; a chair, another. But while it is quite true that no table is a chair (cp. perfect knowledge differs from probable opinion) it would be absurd to characterise a table as a poor excuse for a chair (cp. to characterise probable opinion as a defective approximation of perfect knowledge).

Because of this difficulty, the temptation will strongly be felt (it was, we shall see, not resisted completely by Descartes) to represent adequate knowledge as generically uniform with inadequate knowledge, so that it makes at least *prima facie* sense to speak of measuring the one by the standards of the other. But if we take entirely seriously the parallel between the art/science dichotomy and the probabili-

ty/certainty distinction, such a formulation of the relation appears highly questionable. Descartes himself asserts that 'not all the arts can be acquired by the same man, but...he who restricts himself to one, most readily becomes the best executant' (Rule 1/1). It would in other words be ludicrous to demand of the harpist that he seek mastery of the piano, violin, etc., let alone plow, as a condition of genuine virtuosity with his instrument. So if inadequate modes of representation have the degree of autonomy from adequate modes that art has from science, the corresponding demand should be every inch as ridiculous.

Because there is only a half-analogy between the cases, one is entitled to hold out some hope for Descartes here. It is, I suggest, the link between 'active' and 'passive' that we should concentrate on in seeking an exit from the *impasse*. While extended discussion of the 'active' cognitive *ensemble* will be deferred for the meantime, it is therefore only prudent to conclude this portion of the examination with some brief remarks about cognitive activity, remarks which clarify the character of the difficulty facing Descartes.

On the suggestion which I firmly reject, not merely in light of its problematic nature, but also, and more to the point, because I deem it to be unattributable to Descartes, the relation between the content of adequate and of inadequate modes of cognition is amenable to explanation without departing the orbit of the ' $R = V(o)$ ' formula. In effect, the content of an adequate mode of cognition is said to be (capable of being) reached by totalising the Vs. Were this Descartes' considered position, he could be convicted of committing the meaning-theoretic inconsistency detailed above. But while the achievement of *bona fide* scientific knowledge indeed requires that R be brought into co-incidence with o, this is accomplished, as the texts testify, not by totalising the Vs, but by eliminating the V-parameter entirely.

I mentioned at several places that the knowledge which the mediator aims for is knowledge unqualifiedly in God's possession. 'He on whom I depend possesses in Himself all the great things towards which I aspire..., and that not indefinitely or potentially alone, but really, actually and infinitely' (Meditation 3/170). We saw that

‘scientific’ cognition, as characterised in the *Rules*, ‘entirely consist[s] in the cognitive exercise of the mind’ (Rule 1/1), and thus contrasts with ‘artistic’ modes of cognition which ‘depend upon an exercise and disposition of the body’ (ibid./ibid.). In the extended sense of ‘artistic cognition’, the perceptual cogniser stands in an artistic *style* of connection with the reality about which he strives to acquire information. The representative content of his consciousness R is (partly) determined by V. Since the idea of a vantage point *vis-à-vis* an object presupposes that the subject be in some way linked to a body, that content ‘depends upon a bodily disposition’. Consider now how the proposition that ‘God is not body’ figures in the *Principles* as a premise in the argument to the conclusion that ‘God is possessed of no senses’ (1.23/228). The crucial additional remarks here is that ‘in all sensations there is passivity’ (ibid./ibid.), which implies that a sense-based mode of contact has an ineluctable element of passivity. To whatever extent the perceptual cogniser may be active, his activity is incomplete: ‘all our external senses, in so far as they are part of the body, and despite the fact that we direct them towards objects, so manifesting activity, viz. a movement in space, nevertheless properly speaking perceive in virtue of passivity alone’ (Rule 12/36). So far as these claims go, it is at least a necessary condition of the activity of divine cognition that the representative content of the divine mind be independent of any bodily disposition. This must give part of the meaning of the claim that divine cognition is ‘active’; that divine cognition does consist wholly in ‘the cognitive exercise of the mind’. (N.B. that ‘executive’ and ‘active’ are cognate.) All these claims, which are bound up with the logical syntax of terms like ‘active’ and ‘passive’, point in the direction I mentioned: divine cognition, scientific in the fullest sense, is entirely free of the influence of V. It follows that the product of any attempt to model the contents of an active cogniser’s mind by totalising the Vs would give a distant and unsatisfactory image of the object.

7. Confirming the account: a Cartesian figure

The point about the need to eliminate the V-parameter entirely as a condition of securing genuinely scientific knowledge is evidently important. Relevantly, Descartes remarks in Rule 3 on the inutility of any attempt 'to total up...testimonies' (/6) as a way of achieving certainty. But while the point's clarification could be pursued to good effect via the remark, this would lead into an examination, somewhat tangential to immediate themes, of the close relation in Descartes' texts between the evidence of the senses and the testimony of unreliable witnesses.⁶ So let me close the present phase of discussion by underscoring a thematically more convergent Cartesian thought.

In Discourse 6, Descartes comments on his own scientific enterprise presented to the world in *Le Monde*. 'I had planned to comprise

6. Evidence of the judicial metaphor's philosophical significance is contained in the apparent stutter in the meditator's early critical comment that he had previously believed his best knowledge to be gained 'either from the senses or through the senses' (Meditation 1/145). What does 'through' add to 'from'? The answer is that by 'learning through the senses' Descartes means 'learning by listening to what others say or reading their writings'. (The gloss is confirmed by *Descartes' Conversation with Burman*, translated by J. Cottingham (Oxford: Clarendon Press, 1976), p. 3.) But why does Descartes bother with the 'through' in this connection? An answer will begin to emerge if we note the slow tilt away from 'from' towards 'through', as if the latter precedes the former. Examine here Descartes' catalogue of the sources of factual information in the Letter to the Translator of the *Principles*. The list includes, second, 'the experience of the senses', third, 'the conversation of other men', and fourth, 'the reading...of...books' (/205). And in the Letter to [Silhon] of March 1648, 'sight of our eyes' and 'information passed on to you by teachers' (/230) are aligned in the way of identity. The radical suggestion here is that the flaw in the senses is not phenomenological, but is semantic, and *consists in* the fact what we have been conditioned to package our experiences in a mistaken language. For instance, we react at dawn with the words 'The sun is rising'. It is no accident, of course, that the illustration is Aristotelian. The suggestion, expanded accordingly, is that just as unreliable witnesses create the 'facts' they describe, so the inadequacy of the world-picture vouchsafed by the senses is an Aristotelian verbal artifact. It is well worth noting how Descartes balances the remark that 'the senses sometimes deceive us' (Meditation 1/145) with the observation that 'I am almost deceived by the terms of ordinary language' (Meditation 2/155).

in it all that I believed myself to know regarding the nature of material objects.... However, just as the painters who cannot represent equally well on a plane surface all the various sides of a solid body, make selection of one of the most important, which alone is set in the light, while the others are put in shadow..., so, fearing that I could not put in my Treatise all that I had in my mind, I undertook only to show very fully my conception of light' (/107). The comment may not seem to have any very philosophical content. But the fact is that Descartes evinces a good deal beyond merely literary or aesthetic affection for the figure employed. For example, after remarking that we receive information sense-perceptually 'just in the way that wax receives an impression from a seal', he cautions the reader not to think 'that all we mean to assert is an analogy between the two' (Rule 12/36). This indicates, albeit without fully explaining, why the suggestion is mistaken that an adequate grasp can be gained by totalising the contents of a number — however large — of severally inadequate grasps. Because of the nature of his medium, the painter picks out some one feature of an object for frontal display, to the exclusion of others which are therefore 'put in shadow'. A second painter, or the same painter on another occasion, can 'approach' the object from a different angle. But one thing the painter cannot do. Since his medium lacks one dimension possessed by the object, he cannot duplicate the three-dimensionality of the latter either in a single painting or in however many he may devote to it. By transferring to a different medium, e.g. clay, the painter could achieve a representation which 'adequately' matches his objects's dimensionality. But should he turn in his palette for a potter's wheel, he would cease to be a painter.

Roughly the same holds true, according to Descartes, of the sense-perceptual cogniser. While it may be correct, and is *a fortiori* intelligible, to say that a group of perceiving subjects who pool their data possesses a more accurate representation of an object than any single one among them, the result of this kind of 'totalisation', since it remains within the parameters of sense-perceptual cognition, can only *approximate* to the fully adequate representation which Descartes takes science to achieve.

While indicating roughly why the totalisation suggestion will not do, this again illustrates how problematic Descartes' account is of the relations between 'unclear and indistinct' experience of the world and scientifically adequate cognition. The scientist or adequate cogniser — to proceed in the picturesque terms of the preceding paragraphs — corresponds to the sculptor; the inadequate cogniser, to the painter. But a piece of sculpture, representative of some object, far from being a better painting thereof than any painting the painter might produce, is of course a representation of a wholly different kind. So one who speaks of 'replacing' the one by the other is speaking of doing more than making explicit what is already implicit in that which he takes to need replacing.

The problem for Descartes should be recast independently of the artistic figure. Cognising scientifically, though it is something the sense-employing cogniser does not do, cannot correctly be described as something he fails at *qua sense-perceiver*. So while it may be true that 'certainty' is unachievable in any case of 'probable opinion', its unachievability does not *ipso facto* constitute a flaw in the condition of the probable cogniser which, by self-examination, he will recognise, if he is rational, to oblige him to proceed beyond the condition which happens to be his own.

In the sequel, the following explicitly ontological formulation of Descartes' distinction between probability and certainty will be worked out and defended: the objects of certain knowledge are different objects than the objects of probable knowledge. The critical question posed here will then assume a form which is less anachronistic, and we will thus be enabled to frame an answer more harmonious with the texts. Here we are asking what it is in Descartes' eyes that obliges the probable conception of things to be surpassed. Under the influence of the ontological formulation, the question will transmute into this: why must a conception of the world as comprising objects which are (in a sense to be explained) probable be disciplined by a conception of the world as comprising objects which are (in a sense to be explained) certain? The answer to our question in its present form is that a probable conception of things is non-realist; the propositional components of the conception lack definite truth values. The

answer to the successor question will be that probable objects are not objects in their own right; they are not fully real.⁷ But while a grasp of the details of the answer to the latter will do a great deal to clarify why Descartes believes the probable conception of things to be defective — to be abhorrent to reason — we will find that the belief is recalcitrant to analytic defense, and that the best defense available for it can ultimately be resisted.

7. In one form or another, such a claim is familiar from all the classical rationalist texts. Thus, Spinoza asserts that only substances exist in and are conceived through themselves, intending thereby to place a stigma on the (material) particulars we normally regard as ontologically basic, and Leibniz contends that because the components of the material realm are endlessly divisible, that realm is 'phenomenal', not self-subsistent.

III Rationality and Mind

The preceding results are brought to bear on Cartesian dualism. Cartesian dualism is relative to the Principle of Doubt: the spirituality of the subject is according to Descartes a direct function of, and is argued for by reference to, the subject's ability to achieve 'adequate', sense-transcending, knowledge. In other words, the duality of the subject is the head of a coin whose tail is adequate or 'certain' knowledge of the world. It is shown that this correlativity between the character of the knower and the character of the known is routed through the divine case. God is the 'knower' *par excellence*; for that very reason, he is unqualifiedly spiritual. The ontological similarities and differences between man and God are examined. While the similarities Descartes states confirm the correlativity thesis, the differences begin to suggest the real difficulties which hamper the success of the overall Cartesian project. It is also demonstrated that Descartes misstates his position, and hence that the standard interpretation of the significance of the *cogito*, since it takes its cue from the misstatement, is open to serious objections, and must therefore be revised.

1. *Between falsehood and truth: a via media*

All sense-based beliefs are uncertain if any are. This Cartesian argument is valid. Moreover, to the extent that Descartes' structural analysis of a sense-perceptual mode of contact with reality is accurate, the negative conclusion drawn deserves to be favourably assessed. While this saves Descartes from the kinds of objections usually pressed against the project of doubt in Meditation 1 — it shows that the content of his negative critique of the senses remains worthy of an analyst's attention — he is obviously not out of the woods yet. In light of our improved understanding of the purport of 'probable' and 'certain' in the Cartesian system, it appears that the subject may agree that his normal beliefs are uncertain — indeed, if Descartes' argument is valid and its premises true he must agree — without thereby incurring a rational obligation to work for their replacement by something else. If the uncertainty of a belief entailed its (simple) falsehood,

then the rational agent would, practical considerations apart, be duty-bound to discard an uncertain belief. But since 'uncertain' entails not 'false' but 'untrue', i.e. since an uncertain proposition is a proposition of a kind which cannot definitely be evaluated as true, the situation is quite different. We may concur that a subject, qua rational, cannot abide falsehood. That does not however prevent him, compatibly with bowing to the imperatives of his rationality, from tolerating probability. Accordingly, the use to which Descartes puts PD, his principle of rational acceptance, imports a substantive assumption, viz. that the rational subject cannot rest content with anything other than truth in a realist sense. The assumption is substantive for Descartes because, we now see, a *via media* cuts between the rejection of falsehoods and the acceptance of truths: the acceptance of probabilities. The conception of rationality exhibited in PD is relativised to a notion of truth standing opposed not to falsehood (this would be unproblematic), but also (this being problematic) to probability.

What direction would Descartes' thought have taken had he recognised that his analysis of sense-perceptual cognition, even if unimpeachable qua analysis, does not have the implications he saw in it? Our understanding of the history of the early modern period continues to be compromised by a failure on the part of those interpreters who set the tone to treat the question; and to the extent that we are part of the same historical tradition, our self-understanding suffers too. The philosopher who supersedes the Cartesian position, Kant, moves in precisely the direction alluded to. In any event, given the gap between the negative thrust of the *Meditations* (which thrust, I will show below, has exercised an unrecognised historical influence) and its positive teachings, it is evident that in order properly to grapple with any element of Cartesian philosophy the interpreter has to ask whether or not, and if so in what measure, that element is indebted to the substantive assumptions which vault Descartes beyond criticism of mundane world-representation to high-grade 'science'. The kind of defense supplied above of Cartesian doubt requires, as a condition of its possibility, that the doubt be dissociable from the assumptions. Obviously, the attempt to make something of a Cartesian thesis while ignoring its links with these assumptions,

when such links exist, will produce misrepresentation of Descartes' meaning. A case in point here is the jewel of Cartesianism, mind-body dualism. Whereas Descartes' criticism of the senses is amenable to analytic revitalisation because it is largely independent of positive Cartesian views (though it is doubtless motivated by Descartes' perception of his *terminus ad quem*; he otherwise would have had no excuse for formulating it as criticism), the same cannot be said of dualism. The various reconstructions of dualism essayed in recent years, e.g. in the increasingly sophisticated terms of modal logic or in the reflected light of developments in psycholinguistics and the human sciences, are predicated on a failure to see how profoundly this element of Cartesianism is beholden to the substantive assumptions latent in Descartes' reasoning. What is retailed as the 'real content' of the original article in the recent literature bears the label only.

I may appear here to have switched horses in midstride. It is no accident, however, that I link the issue of the substantive conception of rationality informing PD (i.e. PD in its critical as opposed to its analytic use — the use which imports analytically controversial assumptions) with the issue of Cartesian mind-body dualism. To gain a proper understanding of Descartes' position on mind, direct reference has to be made to his special conception of rationality. When Descartes states that 'in order to understand the facts of metaphysics, the mind must be abstracted from the senses' (*Replies* 2/32), he is not merely asserting that a subject's agreement to guide his doxastic decisions by PD commits him to the truth, and hence commits him to dualism, since the latter is established by various arguments to be true; the point is that man's dual nature (or, more exactly, his essential mentality) is internally bound up with his subjection to the condition of rational belief acceptance. Cognitive activity in accordance with the principle is not, in other words, a mere background precondition for the establishment of essential mentality: such activity is the direct expression, the pre-eminent exemplification, of essential mentality. Another way of putting this would be by saying that the rational doxastic policy of a cognising subject affiliated with a body in a fashion incompatible with the truth of dualism could not be

encapsulated by PD in its critical use. As I explained, rational acceptance, for Descartes, is relative to truth of a radical realist kind. No doubt, it sounds odd to say that the subject whose knowledge consists in truths of this kind — ‘certainties’ — could not be non-dual. But one should not underestimate the implications of the qualification ‘radical’. In any event, none of these formulations is sufficiently precise to permit reasoned assessment. My aim in this chapter is to achieve, as best I can, precision on the matter; to explain, as best I can, the underlying character of Descartes’ dualism by exposing the doctrine’s internal linkage with his conception of rationality. ‘As best I can’. I do not say that the doctrine is defensible, let alone coherent. So the achievement of precision is in the first instance to be viewed as an exegetical task.

2. *What am I? The structure of Meditation 2*

One who accepts the standard reading of Meditation 1 and agrees that PD is worked out by SA is apt to find the argument in Meditation 2 capacious to the point of amorphousness. The appearance that Descartes has tossed a handful of irrelevancies into this Meditation is however overcome once it is recognised, *pace* the standard reading, that Descartes has equipped himself due to the labours of the first Meditation with a firm *result*: sense-based beliefs are ‘uncertain’ in a truth-involving way. For the structure of Meditation 2 is a function of the result. By examining the dialectic of this Meditation it is therefore possible to glimpse the connection between rational belief or knowledge on the one hand and dualism on the other.

Although the *cogito* establishes the meditator’s existence in a doubt-resistant way — as a ‘certainty’ — his nature remains underdetermined: ‘I do not yet know clearly enough what I am, I who am certain that I am’ (Meditation 2/150). The sense in which it could be agreed that I am a thinking thing (*sum res cogitans*) from the (certain) knowledge that I think (*cogito*) is not appreciably different from the sense in which it follows that a table is a coloured thing

from the knowledge that it has a colour. This sense is much too weak for Descartes' purposes. That I am in this sense a thinking thing is compatible with my not being essentially a thinking thing. Can Descartes do any better without begging the question? In the course of trying to respond to 'What is a thing which thinks?' (ibid./153) he suggests that part of an answer might be given by 'a thing ... which...imagines and feels' (ibid./ibid.). So far as the *cogito*'s establishment of existence goes, it may be that I, the meditator, 'am the same who feels, that is to say, who perceives certain things, as by the organs of sense'(ibid./ibid.). However, the suggestion is not advanced seriously, for the following reason: 'it is very certain that the knowledge of my existence taken in its precise significance does not depend on things whose existence is not yet known to me' (ibid./152).

But while we are aware that it is a necessary condition for the truth of dualism that the subject's nature be connected only inessentially with corporeality, and hence aware that it is imperative for Descartes that the subject of the *cogito* be in the first instance distinguishable, and in the end distinguished, from the subject of sense-experience, imagination, and feeling, this reason, as normally construed, would have to be dismissed as grossly question-begging. That I am certain that I exist, though uncertain that I have a body (and hence uncertain that I am genuinely perceiving), does not establish that I am not a body. Otherwise, by parity of reasoning, if I am certain that I am pounding away on a typewriter, but uncertain that the typewriter has 44 keys of print, it would follow that the machine does not have 44 keys of print. While if Descartes reasons thus he would have no defensible right to rule out the possibility that he is 'the same who feels', we are now well-placed to challenge the construal.

The crucial fact, not to be lost sight of for a minute, is that it has been *established* in Meditation 1 that sense-experience, even when 'veridical', does not supply certain knowledge. If the assumption is made that the nature of the (cognising) subject is correlative with the kind of knowledge he possesses — that the subject's conception of himself is one side of a coin whose other side is his conception of the

world — then Descartes can be exonerated of flirting with the preceding fallacy. He would not then be arguing fallaciously from the truth-neutral uncertainty that he is perceiving to the substantial conclusion that his nature is not that of a perceiver. Indeed, he could not argue in any such way, since one's knowledge is comprised by propositions to which truth values have been assigned, and an uncertainty of this kind awaits truth-evaluation. The argument would take him, rather, from the established premise that sense-perceptual beliefs are untrue to the conclusion that, qua knower of the truth — for the *cogito* is deemed to supply a truth — he does not have the nature of a sense-perceiver.

A more careful formulation is called for here. Meditation 1 establishes that the probable conception of things — nearly enough, the sense-based, pre-meditative conception — does not intersect with the true: the union set of certainties and probabilities is necessarily null. But if the propositions expressing the content of a sense-based conception of reality, including among them propositions bearing on the meditator's initial conception of his own nature as a sense-perceiver, are intrinsically probable, isn't the reflective meditator within his rights in refusing to appeal to probabilities in attempting to determine what his (true) nature might be (assuming, of course, that he has such a nature)? A sense-based mode of contact with reality differs in principle from that mode (whatever it is: we know, on the level of words, that it is 'active', 'intuitive', etc.) capable of delivering certainties. So can't a legitimate distinction be made between the nature of the subject qua cognising in the one, and in the other, mode? For if the sense-based conception is not a conception of things as they 'really' are, and if the meditator is 'really' of such-and-such a nature, then his nature will in principle be excluded from the content of the former.

Why does Descartes regard himself as justified in the first place, despite having admitted that he does not yet know what he 'really' is, in not seriously addressing the suggestion that he, whose existence is established as a certainty by the *cogito*, may be 'a thing which imagines and feels'? It would have been grossly invalid for Descartes to discard the suggestion on the grounds that it is uncertain, truth-

neutrally uncertain, that the mediator 'imagines and feels' — because, say, he may be dreaming. But were Descartes relying on the negative result of Meditation 1, that the sense-given conception of things is uncertain, truth-involvingly uncertain, this invalidity would be avoided. And on the assumption that, for Descartes, the nature of a knowing subject is internally linked to the character of the known, the argument would stand a chance of going through to the end.

To be sure, stating that scientific rationality and Cartesian dualism go hand in hand is one thing; proving the affinity, another. With the aid of a result we have already reached, one further step can however be taken to show that the idea of correlativity does make quite good sense in the Cartesian context. Recurring to the ' $R = V(o)$ ' schema, it is possible to discern that the nature of a probable knower would have to be assessed as different from that of a possessor of certain knowledge. For if the o -representative content of the subject's state, R , is determined by a point of view, V , then the subject, by his very nature, will have to stand in some selective relation to the object. But this, in Cartesian terms, bears witness to the subject's embodiment. Where a subject's R is determined by V , it follows that, qua representer, he cannot be described as unconnected with a body. Qua cognising in a mode which supplies evidence for claims which are at best probable, the probable knower could not in other words be evaluated as dual in Descartes' official sense.

3. Knower and known: the wax-experiment

Even if a Cartesian link can be verified between the character of the knower and the character of the known, it might still be objected that Descartes' argumentation in Meditation 2 cannot plausibly be interpreted by its means. In the passages we have been considering, Descartes speaks of existence, not of knowledge. He asserts that the meditator's 'knowledge of [his] existence' does not depend on those things 'whose existence is not yet known'. If he did have the link in mind, should he not rather have said that because he knows for certain that he exists, and hence is a subject of certain knowledge, his

nature is not to be confused with the nature of a subject whose beliefs are at best probable? Shouldn't he have expressed himself in such a way as not to suggest the flaw in probable knowledge to be that objects probably cognised are not known to exist?

For one quite obvious reason, it is not at all surprising that the textual state of play here is, to say the least, unstable. The *cogito* fulfills two functions; first, it serves to establish the meditator's existence as a certainty; second, it provides a springboard towards the determination of the meditator's nature. But it is clear for an equally obvious reason that Descartes should not confound these functions. If he did, it would begin to seem that the meditator's essence consists in his existence — something held by Descartes to be exclusively true of God. In any event, by carefully examining how the argument unfolds in Meditation 2, we can see in a non-conjectural way that the objection we are considering is misconceived.

At this stage Descartes performs the thought-experiment with the piece of wax. Were the objections cogent — were Descartes really concerned here with existence in the way the objector believes — there would be no contrast at all in the offing, and hence the experiment could not have any power to yield an advance. Descartes' meditator has not at this stage established the existence of the material world, *a fortiori* not of 'this piece of wax' (/154). So he could scarcely progress towards a clearer comprehension of his nature by distinguishing the conception of the wax gained by the understanding from the conception vouchsafed by the instrumentality of 'the senses' (/153).

Pace the objector, it seems that the issue of existence is not in question here. Admittedly, Descartes does state his point early in Meditation 2 by reference to existence. But other texts can be mustered which show this to be a blunder. Having proved in Meditation 5 that God exists, Descartes observes that 'I have the means of acquiring a perfect knowledge of an infinitude of things, not only of those which relate to God Himself and other intellectual matters, but also of those which pertain to corporeal nature in so far as it is the object of pure mathematics [which have no concern with whether it exists or not]' (/185). An unremoved residue of

provisionality characterises the wax-experiment, connected with the as yet unresolved issue whether the move can legitimately be made from 'clear and distinct' to 'true'; whether, in Descartes' own words, 'things are in their true nature exactly as we perceive them to be' (*Replies* 4/101). But this presupposes that the 'clear and distinct' can be filtered from the 'obscure and indistinct' quite apart from an actual decision on the move's legitimacy. So the reality of the doubt about the move in Meditation 2 notwithstanding, the thought-experiment can successfully be utilised, according to Descartes, for the purpose of making a genuine distinction. He himself states little less in responding to just the objection we are considering: 'you here incidentally urge [Descartes answers Gassendi, the author of *Objections* 5] that, *while not admitting the existence in myself of anything save mind, I none the less speak of the wax that I see and touch* But you ought to have noticed that I...deal...solely with the thought of seeing and touching' (*Replies* 5/213). The point should virtually be clinched once it is recognised that the continued existence of a problem as to whether clarity and distinctness are sufficient marks of truth is not seen by Descartes as leaving open the possibility that the unclear and indistinct *might be true*. Equipped with the negative result of Meditation 1, Descartes does not need to worry himself on this count. The argumentation of the first Meditation establishes that since standard factual propositions, which have a non-realist semantics, are always, in principle, asserted on the basis of less than complete evidence, no assertion of any such proposition can be assigned the truth value true. So the non-intersection of probability and truth is a simple analytic matter. And from this it follows that the thought-experiment is capable of yielding a substantive outcome quite apart from any consideration of existence.

Testimony enough has already been assembled to warrant concluding that the wax-experiment is, for Descartes, existentially neutral. But an important difficulty remains about how the case is made. Examine this claim: 'it will be said [Descartes writes] that these phenomena [of sense] are false and that I am dreaming. Let it be so; still it is at least quite certain that it seems to me that I see light, that I hear noise and that I feel heat. That cannot be false; properly speaking

it is what is in me called feeling; and used in this precise sense that is no other thing than thinking' (Meditation 2/153). Note, once again, that Descartes explicitly argues that the issue of existence does not arise. Providing the meditator restricts himself to claims about (what I shall call) *seemings* — about what he seems to see, seems to hear, etc. — he is not assuming, nor committing himself to, the existence of corporeal objects. But if these seemings are themselves existentially uncommitting, why does Descartes see fit to go to the lengths to which the wax-experiment takes him? Why doesn't he go *directly* from the 'certainty' of existentially neutral seemings to the nature of his mind? That Descartes moves beyond seemings suggests that there is a distinction to be made even in the existentially neutral realm. With the negative result of Meditation 1 in hand, we are in a position to see what distinction this is.

The structure of existentially neutral seemings, as propositionally expressed, *embeds the sense-perceptual nexus* — the very nexus which has been subjected to searching criticism in Meditation 1. When I describe how things seem to me, I do not merely say that I think of a light, that I think of a sound. What I say is, rather, that I seem *to see* a light; seem *to hear* a sound. So while a restriction to the level of seemings evacuates our claims of existential content — it can be true that I seem to see a light or to hear a sound even if there is no light to be seen or sound to be heard — the representative content of consciousness is framed in terms of the sense-based conception of things. Accordingly, what is accomplished through the wax-experiment is a demonstration that the structure of consciousness, so far as (genuine) knowledge goes, differs in character from the structure of consciousness exemplified by a sense-based mode of contact with the world. The end result is that 'I could not even understand through the imagination [sc. the cognitive instrumentality of seemings] what this piece of wax is [;]...it is my mind alone which perceives it' (ibid./155). Descartes in fact elevates the last point to the status of a 'postulate' in codifying his reasoning in *Arguments Drawn up in Geometrical Fashion*. For purposes of studying one's own mind, it is essential to suppose that 'whatever [is] derived from the...senses is false' (/54). And the point is made even

more forcefully in *Replies* 5, where Descartes explicitly links the operation of the imagination with the 'corporeality' of the ideas which the mind, qua aided by the imagination, considers: 'though geometrical figures are wholly corporeal, nevertheless the ideas by which they are understood, when they do not fall under the imagination, are not on that account to be reckoned corporeal' (/229).

Descartes can therefore be acquitted of arguing fallaciously to the conclusion that he is essentially non-corporeal from the certainty that he exists coupled with the uncertainty of the existence of his body. The meditator does not hold that he is distinct from his body because its existence is 'not yet known' to him. So to represent him as arguing is to ignore the fact that the kind of knowledge of body of which he speaks isn't knowledge *stricto sensu*. Assuming that bodies exist, the meditator 'could not even understand' their nature 'through the imagination'. Even if the existence of bodies is premised, the kind of knowledge the meditator would have of them via the senses would fall under the head of uncertainty. In Descartes' own harsh word, knowledge of such a kind would have to be assessed as 'false'; in my more revealing word, it wouldn't count as more than 'probable'. We must conclude that Descartes is therefore relying here on the negative critique of Meditation 1. Specifically, he is relying on the result that body could not really be 'known' in a sense-based fashion. The wax-experiment establishes, or at least points towards, the way in which a body really 'can be known'(/156).

So there is a lapse here in Descartes' own understanding. As a condition of advancing the case, it is insufficient that the wax-experiment effectively be evacuated of existential assumptions about the material world, since seemings are amenable to existentially neutral construal as well. Descartes is also therefore obliged to use the wax-experiment to block an appeal to seemings in the frame of a specification of certainty. The exchange with Gassendi forces Descartes to clarify his thinking about this. Further, and perhaps better, confirmation accrues by examining the response to Hobbes' remark that '*reasoning will depend on names, names on the imagination, and imagination, perchance, as I think, on the motion of*

the corporeal organs' (*Objections* 3/65). Descartes, we have already seen, denies that our ideas of corporeal objects 'are...to be reckoned corporeal' providing 'they do not fall under the imagination' (*Replies* 5/229). He repeats the point here by emphasising 'the difference between imagination and pure mental conception, as when in my illustration I enumerated the features in wax that were given by the imagination and those solely due to a conception of the mind' (*Replies* 3/66).¹ He *agrees*, in other words, that should the wax-experiment have failed to distinguish existentially neutral seemings, which are nevertheless bound up with an imaginative instrumentality, from the 'pure' intensional structures of thought, it could not have fulfilled its purpose.

This construal is usefully supported by an apparently question-begging comment Descartes makes upon the experiment. With reference to the entrenched, psychologically unavoidable, sense-based conception of the piece of wax, Descartes asks rhetorically: 'What was there which might not as well have been perceived by any of the animals?' (*Meditation* 2/156) — the anticipated answer being 'Nothing'. Animals, for Descartes, are soul-less: they are not ontologically dual. So if a sense-based conception were to qualify as 'knowledge', man's dual nature could not be established. The implication is explicitly noted by Gassendi: '*that sensation which exists in the brutes, since it is not dissimilar to your sensation, [is] capable of earning the title of thought also*' (*Objections* 5/144). We do not have to attribute to Descartes the categorical contention that animals lack souls in order to formulate the supportive point. What he writes can be phrased conditionally: if a being's mode of contact with reality involves the intensional structures of sense, feeling, and imagination,

1. Note with especial care how Descartes *concurs* with Hobbes that were 'names' essential to his reasoning, the result he claims would be endangered. I will take up this revealing admission, which is relevant to assessing the relations between language and mind in the Cartesian system, below. A similar connection between words and 'corporeal imagination' is made by Spinoza: 'words are a part of the imagination — that is,...we form many conceptions in accordance with confused arrangements of words in the memory, dependent on particular bodily conditions' (*On the Improvement of the Understanding*/33).

it would have to be essentially embodied. Conversely, it is because (human) thinking involves a different set of world-directed intensional structures that the thinker is distinct from his body.²

The key to the interpretation is the idea of correlativity between the character of the knower — he whose beliefs qualify as certain — and the character of the known. The implied reading doesn't square with everything Descartes says. In particular, it clashes with the manner in which he seems to extract conclusions about mind in Meditation 2 solely from a consideration of the condition of the meditator who has reached the stage of the *cogito*. On the standard understanding of the texts, a stress on self-contained subjectivity is a basic feature of Cartesianism; and the idea of hermetic subjectivity is antithetical to that of a correlation between the character of the subject and the character of his objects. In the concluding sections of the chapter I will show that to the extent that the *cogito* presupposes a Cartesian commitment to self-contained subjectivity, this is due to an equivocation in Descartes' notion of certainty, an equivocation whose proper elimination banishes the presupposition. A few steps have already been taken to make out that the complexity of the argument in Meditation 2 is excessive from the viewpoint of the standard understanding, and that Descartes' presentation of the wax-experiment, possibly because of his anxiousness to secure existential neutrality, smudges a distinction which is vitally important to him. Assuming that these results serve to hold the objector to correlativity temporarily at bay, I propose now to work out the idea by reference to the wider Cartesian position; specifically by revealing its decisive role in Descartes' dualist thinking. This will place us advantageously to deal in a more secure way with the problems outstanding.

2. The case of Leibniz is enlightening here. In opposition to Descartes, Leibniz appears to treat the intensional structures of (existentially neutral) seemings as a basis for reaching conclusions about the nature of mind. So it is as it should be that Leibniz's view of mind is different from Descartes'. The latter's sharp distinction between men and (sub-human) animals vanishes.

4. *God and the soul: an essential connection*

In the last chapter the divine associations of Descartes' conception of the meditative project were commented on at length. Qua seeker after genuine knowledge, the meditator imitates, in an intellectual medium, the (literal) activity of the divine subject. A connection was thus established between Descartes' view of certain knowledge of the world, on the one hand, and, on the other hand, the divine cognitive situation *vis-à-vis* the reality which the Cartesian scientist seeks to penetrate. If the hypothesis of an internal link between rationality and dualism is credited, two expectations about the texts are therefore created: first, that the issues of divine nature and of man's character will be treated together; second, that divine spirituality will be connected directly with divine knowledge.

Preliminarily to show that the first expectation isn't disappointed, it should suffice to quote a representative sampling of texts. Time and again in the Cartesian *corpus* we encounter the anticipated conjunction. 'God and ... the human soul' (Discourse Preface/81); 'the knowledge of God and of the soul' (Discourse 4/105); 'the existence of God and of soul' (Discourse 5/106); 'God and the soul' (ibid./107); 'there is a God, and ... the human soul is distinct from the body' (*Meditations* Dedication/134); 'the existence of God and the real and true distinction between the human soul and the body' (ibid./137); 'God and the human soul' (*Meditations* Preface/139); 'the knowledge of our mind and God' (*Meditations* Synopsis/143); 'God and my own nature or mind' (Meditation 5/179); 'God and the soul' (*Replies* 2/31); 'an idea ... of God or of myself' (*Replies* 5/223); 'the Deity, the rational soul' (*The Search After Truth*/310); 'God and our soul' (ibid./313). And so on. The frequency of the twinning confirms that the two notions are interlinked in content; that their close association isn't due merely to the doctrinally neutral fact that both issues happen to be central in Cartesian metaphysics.

The second link is also served up by the texts. As the relevant passages will be assembled for detailed inspection below, I content myself here with a solitary citation. At *Principles* 1.23 we find Descartes arguing to the conclusion the 'God is not body' on the

grounds that 'divisibility is included in local extension, and divisibility indicates imperfection' (/228). Since God is perfect, he cannot therefore be locally extended. Descartes now proceeds to say: 'because in all sensations there is passivity ..., we conclude that God is possessed of no senses' (/ibid.) Reverse the reasoning and the moral jumps into relief. A being whose mode of knowledge is sense-based is fundamentally 'passive', as opposed to 'active'. Since God is cognitively active in the fullest sense — since he possesses certain knowledge — he must therefore be spiritual in nature.

Restated succinctly, the thesis comes to this. The special status accorded man in Cartesian philosophy is a function of the view that man, by contrast with animals, is *a knower, a scientist*. To be sure, many would agree that man is unique among his co-terrestrials in the capacity for knowledge without seeing themselves as committed thereby to dualism in the philosophy of mind. But Descartes' conception of knowledge — a conception identified in a negative way by the critique of the senses in Meditation 1, and illustrated more positively by the notion of rationality codified in PD — is a special one. In light of the link between divine knowledge and divine spirituality, we can see how very special indeed. Evidently, rationality is fully exemplified in the divine case. So man's status as a knower is in effect a sign of his divine affinity. Thus Descartes writes early on that 'the human mind has in it something that we may call divine' (Rule 4/10), and later he speaks of 'something comparable in myself [to God]' (*Replies* 5/222). In both instances he has man's capacity for achieving knowledge — genuine or certain knowledge — in view. If so, the constant twinning of the issues of man's dual nature and of divine spirituality is not merely optional. Why is it obligatory? Why, in other words, cannot Descartes' argumentation for the conclusion that man is dual formally duplicate, without substantively depending upon, his argumentation in the divine case? The answer is that the rationality of the scientist is exemplified only *partially* in the human case. While man is for Descartes a knower, a scientist, there is a sense in which, even when all is said and done, this is so at most *in potentia*. Without reliance on the argumentation about God Descartes could not therefore establish what he requires about man.

To confirm the internal link between the issues of man's nature and of God's, and to confirm that the notion of rationality is understood primarily by reference to God, it suffices to consider Descartes' quite explicit claim in *Replies* 2 that 'the idea we have, e.g. of the Divine intellect, does not differ from that we have of our own' (/36). Descartes isn't asserting that the two ideas are indistinguishable. He means that the idea of God's nature is not *generically* distinguishable from the idea of man's; 'except merely as the idea of an infinite number differs from that of a number of the second or third power' (/ibid.). So there is some difference. Human spirituality involves indefinitenesses which are eliminated and potentialities which receive full actualisation only in the divine case: 'in [God] all the treasures of science and wisdom are contained' (Meditation 4/172), 'and that not indefinitely or potentially alone, but really, actually and infinitely' (Meditation 3/170). We already saw how 'certainty' is linked by Descartes with 'immutability' (*Replies* 2/41, *Replies* 6/245) — the foreclosing on all genuine counterfactual possibilities of gaining direct evidence. Precisely as this leads us to expect, God is characterised as 'immutable' (Meditation 3/162, 165).

The (residual?) potentiality in the human case will prove a source of immense difficulty for Descartes' view that genuine knowledge is humanly attainable. And in a fashion supportive of my large thesis it will thereby prove an equal stumbling block in the way of establishing Cartesian dualism. Be this as it may, if the link between man's spirituality and scientific rationality is now credited, a further expectation is created. Because God alone exemplifies scientific rationality to the full, we expect that Descartes will ground scientific knowledge in God. And so he does. It would be absurd to say that this has passed unremarked by the bulk of commentators. But it is quite true that the nature of the 'grounding' is not generally understood. The oft-stated Cartesian claim that my knowledge of the world depends on God is typically construed by reference to divine veracity: God will not deceive me in respect of what I grasp 'clearly and distinctly'. Undeniably, there is that facet to the link. But the claim is a far more substantive one, as we have already glimpsed at several places, e.g. in Descartes' assertion quoted from Discourse 5

that he achieves his 'scientific' results because, by contrast with those he criticises, he does not rest his 'reasons on any other principle than the infinite perfections of God' (/108). True enough, if God is veracious, I can reliably guide myself by the light of the 'clear and distinct'. But it is a far cry from this to claiming that my scientific reasoning is rested *only* on divine veracity. God, in other words, serves for Descartes a function much more exalted than entrepreneur of truth. In some sense, he is also *responsible* for it.

A preliminary indication of the stronger link here is vouchsafed by noting the following verbal overlap. Descartes' condition of rational acceptance codified in PD is that of being 'entirely certain' (Meditation 1/145). Rational credence can be attached only to a proposition which is entirely certain. Now this notion of 'entirety' also appears in a different context; an ontological rather than knowledge-theoretic one. In *Replies 2* Descartes writes: 'this entire world also could be called an entity formed by the divine thought, i.e. an entity created by a simple act of the divine mind' (/34). And so does the notion of truth appear ontologically, e.g. in Descartes' characterisation of God as 'the true cause' (*Principles* 1.24/229).

5. Modernising dualism by changing the subject

Before moving to the precise link between scientific rationality and dualism, a move which will transport us into the misty recesses of Cartesian ontology, it is worth pausing to underline a feature of Descartes' position to which insufficient attention is normally paid. Let me do so in a forward-looking way by calling upon a direction of discussion of that position which has become quite influential in recent years.

Dissatisfied with the barely comprehensible theological elements and dubious ontological reasoning of Descartes' explicit presentation, latter-day philosophers attempt to set Cartesian dualism on a more attractive footing. The attempt of present interest is N. Chomsky's.

It isn't my immediate purpose to evaluate Chomsky's thesis; only to show that Chomsky is insensitive to a feature of Descartes' original

position which is, I believe, of paramount importance to its *Cartesian* character. As a cursory reading of *Cartesian Linguistics* confirms, Chomsky assumes that when a Cartesian philosopher of mind — one who supports dualism of Cartesian type — singles out linguistic activity as special to humans, he is *ipso facto* giving voice to the thought that men have a special kind of rationality; so very special, in the event, that an ontological rift between humans and (sub-human) animals might be deemed, by a philosopher like himself who operates in these terms, to follow.

In the contemporary context of discussion, it is wholly natural to make the assumption. Even if Cartesian dualism ultimately resists resurrection along these lines, the continued relevance of Descartes' thinking requires at the very minimum that the *motivation* for dualism be one with which we are able to conceive an unproblematic (even if superficial) sympathy. But natural though the assumption be, it doesn't follow that it is legitimate. This direction of discussion begins, to put it figuratively, *from below*: from the 'positive' level — the level comprised by facts which are common ground among contemporary thinkers. These will of course be facts about the world as naturally conceived. In effect, some distinction between men and animals is sought which can be deemed sufficiently strong to warrant what we ourselves regard as scientifically respectable speculation or theorising about underlying differences.

Positive differences between men and animals are legion. Men walk upright. Their opposable thumbs enable them to manipulate the physical environment in ways much more complex than (other) animals. Men are social beings whose communal behaviour, unlike that of ants and bees, is highly plastic or adaptive. Beginning from the positive level, one might therefore speculate in a dualist direction on the basis of such uncontroversial and human-individuating truths as 'Men live in changing societies', 'Men are tool-makers and users', 'Men play games', and so on.

That dualist speculation must have a motive scarcely deserves remark. One does not spring awake one fine day to the truth of dualism, or excogitate it apart from any prior deliberation about the life-world. But it does not have to be the case that the operative

motive is an entirely positive one. Rather than beginning from below, the dualist may well set out *from above*. A doctrine, surfacing occasionally in Descartes' texts, attests that his point of departure is of such a kind, viz. the doctrine, mentioned by Chomsky, of the 'great chain of being'.³ Thus Descartes speaks of possessing an idea which 'represents a God,...others representing corporeal and inanimate things, others angels, others animals, and others again which represent to me men similar to myself' (Meditation 3/164), and he refers to a hierarchy of intelligent natures 'more perfect than a human being' (*Replies* 5/218). Chomsky, as behooves a 'scientific' champion of dualism, does not believe that this standard piece of seventeenth century intellectual luggage exercises any very profound influence on Cartesian philosophy. But uncritically to ignore its possible influence in the frame of a consciously exegetical project is to allow one's own domestic assumptions to eclipse the obligations of interpretative impartiality.

Thanks to the labours of the preceding chapter, no room for doubt remains that Descartes' discussion of human intellectual activity is conducted very much under the shadow of a divine cognition-theoretic ideal. Meditation 4 gives the point a nice epigrammatic formulation, in the thoroughly non-positive assertion that man is 'in a sense something intermediate between God and nought' (/172). Time and again, Descartes struggles to show that despite man's intermediacy, he is not incapable of measuring up to the divine ideal. So unless it is expressly confirmed that these facts have no real doctrinal influence, it is therefore incumbent of anyone seriously interested in expounding capital 'c' *Cartesian* views of human nature to keep firmly in mind that mundane human cognitive activity is in Descartes' view defective, that it is less than it might be.

It does not take prophetic powers to anticipate that a latter-day investigator who listens to the historical literature for early echoes of his own scientific views will likely soft-pedal this strain in Descartes' writings. Chomsky, for whom Cartesian speculations about man's cognitive deficiencies from a divine standpoint are at best of

3. *Cartesian Linguistics* (New York and London: Harper & Row, 1966), p. 13.

antiquarian note, hears Descartes' appeal to the chain of being doctrine as bearing primarily on the *natural* distinction between men and animals, i.e. as giving a usefully dramatic form to the thesis, based on the positive facts, that man is qualitatively superior to animals. But with specific reference to Chomsky's link between human linguistic activity and dualism, we can raise a more articulate doubt about the accuracy of this construal of the texts. For the mentioned doctrine gives at least equal expression to Descartes' belief in a qualitative difference between man and God. Accordingly, in attempting to gauge the relevance to Cartesian dualism of some positive difference between men and animals, it must be asked whether, in respect of the difference, men align with God. As far as Chomsky is concerned, the question's importance is easily appreciated. There are, again, many and varied differences between men and animals; differences in morphology, behavioural differences, and so on. The bulk of these has no bearing on Descartes' dualist thesis. Descartes himself remarks: 'Within a single species some...are more perfect than others' (Letter to More of 5 February 1649/244). That men alone among animals are language-users would therefore be relevant to Cartesian dualism only if it reflected some feature of man's affinity with God. So while Chomsky may have hit upon a dualistically significant difference, turning the 'may have' into a 'has' requires doing more than Chomsky does.

I shall eventually address the question of the link between human linguistic ability and dualism directly. But though the preceding remarks have been framed by reference to Chomsky's reading of the link, much the same point can be made even at this stage without exiting the Cartesian frame proper. In *Objections* 5 Gassendi expresses just the kind of opposition which, if I am right, forces Descartes' real motivation out into the open. Gassendi agrees that there are differences, striking ones at that, between men and animals. But he insists that while these may show man to have a more refined intellectual nature than the brutes, they do not thereby sustain a difference in kind: '*man may be the most outstanding of all the animals, yet without being detached from his place in the number of the animals.... For even that self which you specifically style the mind,*

though it may very well imply a higher nature, cannot be anything of diverse type' (/145). Nor does he omit to mention language in this connection (/146).

Gassendi, no dispassionate exegete, has his own materialist principles to support, and support them he does, despite Descartes' vituperations, with a refreshing verve. It is obvious however that Gassendi's methodological approach to the mind/body issue proceeds from below. I am suggesting that Chomsky's anti-materialism is of a kind that grows from challenging a Gassendi-type position on its own terms, by attempting to show that the positive differences a Gassendi acknowledges cannot be accommodated materialistically. But Descartes' answer to Gassendi has a quite different ring to it. He responds by adducing non-positive considerations which Gassendi would cheerfully concede to be incompatible with his theoretical principles. The contrast here, I am maintaining, indicates that the Cartesian dualist theses is sure to be misrepresented by Chomsky.

Let me capsule the problem with an eye on what is to come. Chomsky's reconstruction reacts to the fact that humans, alone among animate terrestrials, are capable of achieving knowledge, the plausible thought being that the ability to use language is a *sine qua non* for knowing. But nothing in Chomsky's treatment discriminates knowledge of the kind comprised by Descartes' realist view of things, viz. certain knowledge, from knowledge of the kind comprised by the view Descartes is committed to superseding. We may dimly appreciate that Chomsky's neutrality here could well be exegetically prejudicial, just in case Descartes links language with the latter view.

6. *God and man: corporeal affiliation and finitude*

Without prejudging Descartes' motivation to be 'from below', let me develop the internal link between rationality and dualism more directly. To this end, it is necessary to penetrate into the shadowy recesses of Cartesian ontology — specifically into the region concerning the difference between man and God.

In a passage examined cursorily above, we come upon a first point

of contrast: 'God', according to Descartes, 'is not body' (*Principles* 1.23/228). By this Descartes means that God, unlike man, is not associated with a body. Elsewhere in the *corpus* a second difference is encountered. In the Preface to the *Meditations* Descartes writes: 'we must consider our minds as things which are finite and limited, and God as a being who is...infinite' (/138). And later: 'I am finite' (Meditation 3/166). Qua spiritual being, man is, as opposed to God, finite.

Prima facie, there are then two dimensions of contrast between man and God. Man is a finite spirit; God, an infinite spiritual substance. Man is associated (at least at times in his career) with a body; God is untrammelled by any such bodily association.

That a finite spirit could cease to be embodied, i.e. could cease (as I shall also say) to have a corporeal or material affiliate, implies the logical independence of the two dimensions of contrast. In the event of cessation, the second difference between man and God would remain in force — disembodiment could not by itself render a finite spirit infinite — while the first no longer obtains. But two features of Descartes' treatment of the contrasts seem to tell against their logical independence. First, God's infinitude appears to function in Descartes' hands as a premise for the conclusion that he has no corporeal affiliation. After pointing out that God possesses 'any infinite perfection' (*Principles* 1.22/228), Descartes concludes that 'God is not body' on the strength of this, that 'divisibility is included in local extension, and divisibility indicates imperfection' (*Principles* 1.23/ibid.). But if the two dimensions of contrast are logically distinct, then God's infinitude, which is that of a spirit, should have no logical bearing on whether or not he may be associated with a body. If it is retorted that Descartes' initial attribution of any infinite perfection to God is neutral on God's spiritual status, it will have to be concluded that the argument begs the very question at issue. Since boundlessness is an infinite perfection of matter, the clear possibility exists that the divinity may be associated with an infinite body, and Descartes gives no reason for ruling against it. (Note that Descartes' claim that local extension includes divisibility isn't the claim that a body can be sub-divided *into* extended parts, but that any localised

body, in being bounded off and finite, is divided *from* other bodies.⁴) Second, even if Descartes never states in so many words, he certainly suggests that the corporeal affiliate of an embodied finite spirit must in turn be finite. But if the dimensions of contrast are logically distinct, the finitude of a spirit should have no implications for the kind of body it is associated with if it is associated with any.

Although Descartes' unstable formulations readily incline us to think differently, I believe that save for the link between the infinitude of God and the impossibility of his being associated with a finite body, all the other options are in fact left open by him. Two results emerge from a very close examination of the relevant argumentation: Descartes allows a corporeal affiliation for God parallel to that which characterises a finite spirit during its (natural, earthbound) career; he also leaves open a sense in which a finite spirit may be associated with a non-finite body.

To work towards the first of these results, let us put Descartes' argument that God is not body under the microscope:

in corporeal nature since divisibility is included in local extension, and divisibility indicates imperfection, it is certain that God is not body (ibid./ibid.).

4. At times, e.g. in *Replies* 3/37 and the adjacent *Arguments Drawn up in Geometrical Fashion*, Descartes seems to equate the claim that local extension includes divisibility with the claim that a body can be divided into extended parts. His attitude here is motivated, I think, by an indiscriminate desire quickly to refute the possibility that mind and matter mightn't be distinct by pointing out that mind isn't in any intelligible sense 'internally divisible'. Nevertheless, the construal I offer is mandatory if sense is to be made of the argumentation under scrutiny. Consider this virtually decisive text from Meditation 2: 'By the body I understand...something which can be confined in a certain place, and which can fill a given space in such a way that every other body will be excluded from it' (/151). It can also be noted that in the abovementioned passage from *Replies* 2 Descartes says not only that body is imperfect because 'divisible into parts', but also that 'each of its parts is not the other'. The last conjunct points directly to the reading I approve. And consider how Arnauld construes the claim as I do (Arnauld speaks of time, but the point transposes to space): 'the idea of an infinite being contains within it that of infinite duration, i.e. a duration bounded by no limits, and hence indivisible' (*Objections* 4/90). More confirmatory remarks will be cited below.

The passage is puzzling for a pair of reasons. Cartesian ontology contains both material and mental substances; neither the corporeal nor the spiritual realm is at any ontological disadvantage. So why does Descartes say that bodies, qua involving divisibility, are imperfect? Doesn't this imply that the corporeal realm contains only imperfect substances, and hence is ontologically inferior? Also, Descartes specifically asserts that divisibility is included in *local* extension. Verbally, this throws up the implication that divisibility isn't included in non-local extension, and hence implies that God might still 'be body' just in case *his* extension is non-local. Why then does Descartes see fit to deny that God is body?

The first puzzle is solved by noticing that there is indeed a sense in which, for Descartes, standard corporeal objects, i.e. particular material bodies, are imperfect. Each such body is limited by other bodies — those bodies simultaneously occupying places from which the former is *ipso facto* excluded. Because Descartes doesn't distinguish matter from extension — the extended world being in effect a materiate plenum — his point can be reexpressed thus: since finite spatial places and regions exist *partes extra partes*, each such place and region 'includes divisibility'. Strictly speaking then, only extended nature as a whole is a Cartesian corporeal substance, since it alone is unblemished by the mentioned imperfection. We wouldn't therefore be going too far wrong were we to reclassify finite bodies as *modes* rather than as substances in Descartes' ontology. It follows that the Cartesian material realm isn't ontologically inferior to the mental, the difference between them being nothing more than quantitative.

This outcome helps with the second puzzle. If all of the material world is a single substance, then strictly speaking *no Cartesian corporeal substance has local extension*: the parts thereof are locally extended, but they aren't substances. So Descartes does indeed maintain that divisibility isn't included in non-local extension. But once it is agreed that his formulation here is deliberate, the conclusion is mandated that he intends to leave open the possibility that God might be corporeal in much the same sense that man is. As now interpreted, Descartes' argument isn't aimed at the result that God cannot be body on the grounds that this would implicate him in im-

perfection, but only at the result that God cannot be linked for this reason with any *finite* body.

The urge should be resisted to reply that the above reading must be mistaken, since Descartes asserts, and asserts in so many words for that matter, 'God is not body'. It is perfectly natural for 'body' to be employed as short for 'finite body', or 'body which includes divisibility', i.e. 'body in the normal sense — that sense in which tables and trees are paradigms'. Bourdin, the author of *Objections* 7, uses the term in just this way. '*Body is extended, bounded in place*' (/288). And he is adhering to Descartes' own remark in Meditation 2 that by body is understood 'something which can be confined in a certain place' (/151), a remark which implies that the whole of the material world is not a body. Similarly, slightly later, Descartes himself asserts that 'any material thing...[is] limited by [some]thing' (*Principles* 1.19/227). So it therefore remains true that God is not, in this natural sense, body, and the reading does not strand Descartes high and dry without a contrast. The following sharp difference between man and God is preserved: God's corporeal affiliation, if there is one, does not implicate him in imperfection, as does man's. I agree, however, that the construal is, at first sight anyway, somewhat odd. To neutralise the feeling of oddity, some quite compelling motive should therefore be produced for Descartes' wishing in the first place to link God with non-local extension. This, in the event, is not a problem. We need only determine why Descartes sees fit to link finite or human spirits with body, and extrapolate from there to the divine case. We shall shortly see that his motive is the same in both cases.

7. *Non-local extension and a crucial objection*

In a number of passages scattered through the *corpus*, of which the following may serve as exemplary, Descartes makes this *prima facie* curious claim. 'The mind is co-extensive with an extended body even though it has itself no real extension in the sense of occupying a place and excluding other things from it' (Letter to Hyperaspistes of August 1641/119-20: see also *Replies* 6/254-5 and the correspondence

with Princess Elizabeth/142). Pursuant to the puzzles lately discussed, it is clear that Descartes is incidentally concerned here to avoid saying anything which could be construed to imply that finite minds 'include divisibility' — as this would undermine their substantial status. He thus insists that whatever that sense is in which a mind can truly be said to be extended, it is not the sense of 'extended' from which spatial occupancy follows. Now it is plain that this incidental worry would have been served more effectively had Descartes avoided all flirtation with the idea that minds are somehow extended; any weakening of the claim 'Minds and bodies have nothing in common' will threaten Cartesian dualism. (A parallel will render the threat plain. Normally, spatial location is not assigned to properties like colour. We could however say of a quantity of paint that its colour is at every point which it occupies. Descartes' claim that mind is co-extensive with an extended body is something like this last. But it would be absurd to erect a dualism on the distinction between an object and its colour, and a critic of Descartes might use the mentioned passage to argue that mind/body dualism is correspondingly insupportable.) That Descartes abandons caution on so crucial a matter by itself attests, therefore, that he has a very strong reason for somehow connecting mentality and extension. What could the reason be?

Many of the conscious states of a human spirit are linked in a particularly intimate way with some one part of the material world, viz. that part constituted by its associated body, as well as the regions of the world proximate thereto and the occupants of these regions. The facts here are familiar. When a pin pricks my finger, you may feel distressed; but you feel no pain. When an object is behind my back, I cannot see it; should the object be transported to a point in front of me, or should I turn about, then, if favourable conditions of viewing obtain, I will see it. No (mere) volition of mine can make a nearby stone move. Plainly, Descartes' claim that mind is co-extensive with some portion of the material world responds directly to these psycho-physical commonplaces.

It now becomes clear both that, and why, Descartes budgets for a link between divine substance and non-local extension. The listed

psychophysical facts tilt towards us the physical side of a coin whose mental side is the obvious restriction or limitation in the representative content of my sense-perceptual experience. What I see is, to repeat, a function of the spatial location and positioning of my bodily affiliate; by virtue of seeing some things, I am unable to see others. But God is not subject to any such restriction or limitation. He is 'omniscient' (Meditation 3/162); 'all-knowing' (ibid./165). Since, therefore, my normal epistemological shortcomings are due to my not being in immediate contact with the material world as a whole, and as this fact is expressed by assigning to my mind a special kind of co-extensiveness *with a certain part of the material world*, it follows by parity of reasoning and expression that God's epistemological perfection — his actual possession of 'all the treasures of science and wisdom' (Meditation 4/172) — requires that he be characterised as having the special kind of co-extensiveness *with all of the material world*. If I am locally extended in the special manner, and temporally restricted, God is by contrast omnipresent or ubiquitous and eternal.

A crucial objection will be pressed against the interpretation. It will be complained that the linkage of divine substance with non-local extension for the epistemological reasons specified clashes intolerably with the central Cartesian thesis that genuine knowledge cannot be acquired by means of the senses. Isn't the point of such a linkage in the human case to give expression to the facts of sense-perceptual experience, e.g. that the representative content of my consciousness in cases of visual experience is a function of the state of some body — my body — in the material world? Doesn't the extrapolation to the divine case from the human thus imply, self-disqualifyingly, that divine knowledge is sense-perceptual in character?

Until we have a surer handle on Cartesian scientific knowledge, no confident reaction to the objection is possible. But this gap in our present understanding obviously affects the objector as well. He too cannot be sure of his critical footing until something positive is set down about the nature and products of scientific cognition. It will be a while before the information lacking here is supplied. Rather than attempting to block an objection which may not have to be blocked

at all, let me therefore show that the texts sustain my interpretation and accommodate the objector's thought in about equal measure, so that if the objector has indeed put his finger on a genuine problem, it is a problem for Descartes, not an artifact or by-product of the present reading.

Particularly pertinent here is the fact that Descartes himself connects the senses with the idea that the mind has a finite corporeal affiliation. In the very passage aimed at establishing that God is not body, the claim that human bodies 'include divisibility' is directly linked with the remark that 'it is of some advantage for us to have senses' (*Principles* 1.23/228), i.e. for the finite spirit qua finitely embodied to have senses. In insisting that genuine knowledge cannot be sense-perceptual in character, the objector very likely has one eye fixed on the Cartesian view that genuine knowledge is (in a way mysterious even to him) *innate*. But doesn't the mentioned connection show that, according to Descartes, one of the differences between a finite and an infinite corporeal affiliation is that a non-locally extended spirit, precisely because of this non-locality, attains its information about the material world without the assistance of senses as we know them? In terms of the ' $R = V(o)$ ' schema: when R is coincident with o , the representative partiality definitive of sense-perceptual contact with the world has been overcome. That 'innate' doesn't sound like the *mot juste* needn't be a source of oppressive concern. The relevant fact is that Descartes seems both to accept the objector's point and to make claims which speak in favour of the interpretation the objector disapproves.

Though quick, this way with the objection isn't peremptory. Nothing I have said implies that the objector is mistaken to insist that the interpretation would disqualify itself if it made divine knowledge sense-perceptual in character. From what I have said the most that can be inferred is that the objector is not himself in a position categorically to assert that the idea of co-incidence between R and o , explained in terms of non-local extension, links up positively with sense-perceptual cognition. Still, conscious that nagging doubts may remain, let me append a few remarks to mollify those who persist in thinking my response both quick and peremptory.

In contraposing the data vouchsafed by the senses to innate information, the objector is really pushing the key question back a step, not answering it. To say that genuine knowledge of the material world is possible for me because God has implanted ideas in my mind must lead us to ask: what is the nature of this knowledge from God's vantage point? (In Plato's *Meno* the slave-boy's present knowledge is said to be recollective. This leaves unexplained how the slave-boy initially gained the knowledge.) It could perhaps informatively be said that God's knowledge is innate if by this is meant that God, since he created the world, has a special position in regard to it. But this is certainly not to supply an epistemological sense to 'innate' which intelligibly contrasts it with 'sense-perceptually acquired.' For it doesn't follow from our normal understanding of 'A created B' that A stands in a special epistemological relation to B: witness the periodic recall of automobiles by the manufacturer. Emphasis may be placed on the fact that divine creation is *ex nihilo*. But if we are dealing with a *sui generis* type of creation from which epistemological implications do flow, then the problem is simply thrown back on the *sui generis* link, which we may justifiably claim not to understand.

Two more points. Descartes states clearly that the world created by God is 'outside of Himself' (Meditation 3/162). The claim is repeated in Gassendi's paraphrase at *Objections* 5/157. Undeniably then, the question of what kind of knowledge God has of the (alien) world cannot informatively be answered by repeating the word 'innate'. Though Descartes doesn't devote much space to the issue, he is therefore committed to offering some account of the mechanism of divine knowledge. Should the temptation still be felt to argue that the commitment can be dodged by stressing God's special creative link with the world, a second point might be considered. With an eye on the background Cartesian thesis of a chain-of-being, we could pose the question not about God but about a being who doesn't differ from God in spiritual infinitude, as man does, but solely in not having created the world: 'some evil genius not less powerful' (Meditation 1/148). This being would presumably have to possess accurate knowledge of the world in order systematically to 'lay traps for my credulity' (ibid./ibid.). So here the issue would certainly arise, and

could not informatively be settled by ascribing innate knowledge.

There is no doubt that the objector, in denying that the senses are a suitable Cartesian channel for achieving knowledge, is relying on Descartes' frequent connection of sense-based representation with the technical notions of obscurity and confusedness. But when we appeal to the texts for enlightenment on what these *termini technici* purport, we find Descartes serving up the following *reason* for classifying sense-based data as unclear and indistinct; the information gained by the senses (=the information expressed in propositions which give the factual content of sense-acquired beliefs) is *incomplete* or *partial*. At *Principles* 1.34/233, to take one instance, the phrase 'obscure and indistinct' is explicitly opposed to 'perfect and entire'. As I have just explained, the difference between information gathered by a non-locally extended mind and by a locally extended one is precisely the difference between completeness and fragmentariness: the difference between co-incidence of R and o on the one hand, divergence on the other.

8. *Knowledge and local extension*

These two claims were attributed to Descartes at the start of the examination of Cartesian ontology: Descartes allows a corporeal affiliation for God; he leaves open the possibility that a finite spirit might overcome its finite corporeal affiliation. While I believe that the preceding discussion effectively establishes Descartes' subscription to the first claim, a little more work is needed to verify his commitment to the second. The result's firm establishment is crucial to the contention that dualism and rationality are Cartesian correlates.

One who approaches the second claim from a logical direction might think to dispose of the issue speedily by arguing that if the two dimensions of contrast between man and God are logically distinct, then spiritual finitude is compatible with non-local extension. But even if this is true, it is no less true that the psychophysical correlations which figure in experience as we know it do not exemplify any such abstract logical possibility. So to settle the matter in this way and

leave it at that would be to sever the point from our actual, human, condition. The exact relevance of the claim to that condition will emerge, I suggest, if we remove from the logical to an epistemological context.

Suppose Descartes were to deny that, epistemologically speaking, the finite spirit could overcome the effects of its finite corporeal affiliation; to deny that R could be brought into co-incidence with o. *It would follow that the finite subject could not achieve knowledge*: all his beliefs about the world would be intrinsically probable. In the preceding section I explained that Descartes' account of divine knowledge makes implicit reference to God's non-local extension. God's knowledge of the world is 'immutable' because there are for him no undischarged evidential possibilities. So if knowledge of the world is to be within the reach of a finite being like myself — and its attainability is quite essential for the whole Cartesian project; otherwise Descartes couldn't claim that a being like me, e.g. the meditator, is under a rational obligation to seek it — I must be able successfully to perform an *imitatio Dei*. It must be possible for the divine situation to be reduplicated in my own case. Not that I must achieve an actual divinity: the reduplication needn't be total. Rather, the epistemological effects of the divine situation must be reduplicable in my own case.⁵ This means that epistemologically speaking it must be possible for it to be with me — with the representative content of my consciousness — as if I have overcome the effects of any essential connection with a finite corporeal affiliate.

The point can be transposed so as to attune it with more familiar Cartesian terms of discussion. Descartes holds that if I am to make headway in my search for knowledge, a progressive diminution of obscurity and confusedness in my representation of the world is required. Knowledge will have been achieved only when that representation is finally rendered fully clear and fully distinct. I explained

5. In a letter of 17 October 1630, Descartes sharply rebukes Beeckman: 'I cannot convince myself that you are so out of your mind as to believe [that I] put myself on a level with angels' (/17: passage rearranged). It is amusing to note that mature Cartesian metaphysics requires the finite subject to (be able to) put himself into God's position; to put himself, in effect, 'out of his mind'.

above how unclarity and indistinctness are internally or structurally bound up with the kind of representation of the world which sense-experience supplies. Now to the extent that my actual epistemological condition is a function of the fact that I am finitely embodied, this condition will fall short of knowledge. My senses, due 'to the constitution of their nature' (*The Search After Truth*/313), put me in touch with only a limited portion of the world, and hence give me at best an incomplete and hence inadequate picture. If knowledge is, as Descartes claims, attainable by me, I must therefore be able to overcome the limitation, i.e. to achieve the epistemological condition of a non-locally extended spirit. And note finally that Descartes is careful to say that 'it is advantageous' for a being like myself — a finite spirit — to have senses. The clear implication is that there is nothing epistemologically irrevocable about the fact.

9. *Two conceptions of body: the wax-experiment explained*

We return for that 'more secure' treatment promised to the difficulties aired in section 3, where the bare essentials of the present line of interpretation are sketched. It was granted that if the interpretation is approved, Descartes' discussion in Meditation 2 has to be evaluated as misleading in several respects, and this may have detracted from the interpretation's appeal. We are now in a position independently to see that there really is a lapse in Descartes' own thinking — a fact which confirms the reading's accuracy. Indeed, it emerges that Descartes' project would be in severe jeopardy were the reading worked out in past pages not the one that he would, on balance, endorse.

Knowledge — *bona fide* scientific knowledge, no less — is possible according to Descartes. A subject who governs his doxastic decisions by PD is not left empty-handed. In particular, and dogmatically or not, Descartes maintains that one who takes the requisite pains will achieve such knowledge about the material world. Once this is appreciated, the problematic character of the surface form of the argument in Meditation 2 is hard to miss. In this Meditation Descartes moves from an uncertainty about body in general — hence an uncertainty

about his body — coupled with the certainty supplied by the *cogito*, to the conclusion that mind and body — hence his mind and his body — are really distinct. But *what* conception of body is it that is assessed here as ‘uncertain’? Plainly, the sense-based conception dealt with in Meditation 1. *This, however, is not the only conception which exercises Descartes.* Descartes does not hold that all beliefs about body are uncertain in the way that those bearing on body as conceived in Meditation 1 are uncertain. Otherwise, the subject who abides by PD would draw a blank. So if the mind/body distinction of Meditation 2 is to be metaphysically basic, it must be a distinction holding not primarily (or even at all, for that matter) of the inadequate, sense-based, conception of body, but of the adequate conception comprised by Cartesian science as a *fait accompli*.

Attend again now to the move made by Descartes in Meditation 2. The meditator’s knowledge of body is uncertain; the *cogito* supplies a certainty; therefore, the meditator’s nature is separate from body. But the first premise here isn’t Descartes’ last word. In his view nothing prevents the meditator from gaining certain knowledge of body, and as a matter of fact he does eventually achieve it: ‘certainly ... I possess a body’ (Meditation 6/190). Reformulating the move so as to harmonise it with this truth, what do we come up with? The meditator’s knowledge of body is (in the end) certain; the *cogito* supplies a certainty; therefore, Now it cannot be inferred that the meditator’s nature is divorced from corporeality. To warrant the inference, more is required. The addition, I maintain, comprises the wax-experiment and its train, whose full elaboration has been supplied in the discussion of Cartesian ontology just concluded.

One wants Descartes’ dualist result to be in other words the valid consequence not only of a sub-set of propositions which the meditator genuinely knows, but of all that he knows and can know for certain. Otherwise, the result might well be overturned once the rest of what the meditator knows is brought into play. ‘May there not be some necessary relationship, unsuspected by Descartes, that will link his idea of thinking substance to that of extended body?’⁶ On the

6. Kenny, *Descartes: A Study of His Philosophy*, p. 95.

standard reading of Meditation 2, with the *cogito* deemed to deliver up the meditator's existence as a certainty quite apart from any consideration of the world beyond, there may indeed. But that isn't the correct reading. The wax-experiment gestures in the direction of what certainties about the world are like; and the dualist conclusion is based on what the possibility of achieving genuine knowledge here requires.

A significant point of comparison is revealed between the case in Meditation 1 for the uncertainty of normal beliefs and the case for dualism in Meditation 2. The former case would be irreparably weak if the claimed uncertainty were rested by Descartes on the possibility of a malign genius's so arranging matters that while everything seems as it normally does nothing is as it seems. Not only would rejecting the fantasy be at least as reasonable as accepting the conclusion, but also, more pertinently, the uncertainty at issue here is truth-neutral, like that which the dream-argument involves. As shown however, Descartes' conclusion is in fact extracted from his structural analysis of sense-perceptual experience, an analysis with implications for truth. Similarly, the case in Meditation 2 would be disastrously feeble were the thesis that the meditator's nature is dual rested on the truth-neutral uncertainty affecting his existential beliefs about the material world. But here too the uncertainties about body used to support the dualist conclusion are truth-involving; they concern a conception of body foreign to Cartesian science. While this saves Descartes from standard criticisms, it indicates at the same time, as noted in the preceding paragraph, that dualism has to be established by the meditator relative to what is known with certainty about the material world. Since what is known with certainty *by the meditator* may not encompass all that can in principle be known here with certainty, this still leaves a lacuna in the argument, on which I will comment below.

Though the two cases compare significantly in the preceding respect, an even more significant disparity exists between them, towards which I glanced in section 1. So far as the doubt in the first Meditation goes, the uncertainty of sense-based beliefs is demonstrated without essential reliance on the full-fledged conception of Cartesian science. The metaphysical hypotheses Descartes employs

are designed only to lend whatever kind of support they can lend (persuasive support alone perhaps) to the independent negative argumentation; it is the latter itself which carries all the demonstrative weight. But the attempt in Meditation 2 to establish dualism along the preceding lines is inextricably intertwined with that conception: the dualist result could not be reached independently thereof. So dualism is in a far more problematic case. Here the metaphysical increment, taking the form of an appeal to the divine cognitive situation, gives a fairly direct expression to Descartes' view of what properly scientific knowledge is like.

The exact significance of the wax-experiment can be appreciated only when this is clear. Sometimes it is claimed that the experiment is designed to supply a better idea of materiality, so that the dualist conclusion will not hold only of an 'inadequate' conception of body. According to Descartes, for example, material bodies are not in reality the bearers of properties like colour (see *Principles* 1.69/248). For the meditator to have established that he is not coloured would therefore be for him to have established his distinctness from body as body is normally conceived, a conclusion evidently compatible with his being body as body is scientifically conceived. In general, were Descartes to argue that mind is distinct from matter as the latter is improperly understood, even a critic satisfied from a logical viewpoint with the reasoning could justly complain that for all that mind might not be distinguishable from matter qua properly understood. But this, while providing a convincing rationale for the wax-experiment, fails to plumb the deeper reasons for its importance, viz. because of the correlative relation between the character of the knower and the character of the known. The wax-experiment shows writ small that the mind's way of grasping reality is non-selective. The meditator, qua world-cogniser, is in this respect comparable with God, whose grasp of reality is paradigmatically non-selective. What the mind is shown to be capable of doing in the case of 'this piece of wax' God can accomplish of reality as a whole. I repeat that since 'grasps in a non-selective way writ small' doesn't mean 'grasps in a non-selective way *simpliciter*', the door remains ajar to the possible outcome that the human mind's grasp of reality is at base selective,

which would imply that these minds aren't ultimately distinguishable from body. Rather than recoiling at the prospect of such a development, I think we should resign ourselves to it. The unremoved potentiality in the claim that the human subject can win through to a scientific grasp of things corresponds to an unremoved element of potentiality in the strongest dualist conclusion to which Descartes is, in his own terms, entitled. Even if he makes no concessions whatever to those of his critics who blast his arguments as entirely unsuccessful, Descartes is obliged to agree that the strongest conclusion to which he can justifiably help himself — supposing his reasoning to be clear of mechanical faults — is that so far as the facts of the case go human subjects cannot be denied to be dual, from which it doesn't follow that their duality can be asserted. One may entertain doubts as to whether he has, even in his own terms, established this, and the reasons for scepticism will be aired in due course. But to have made out a thesis compatible with though falling shy of unqualified dualism wouldn't I reckon be despised by Descartes himself as profitless toil.

10. *Fitting in the cogito*

One issue of quite central importance remains: the position of the *cogito*. *Pace* the reading I have advanced, isn't it the case that Cartesian dualism is based directly on the certainty of the meditator's existence — '*sum*' — which is extracted from the premise 'I think'? However, if what precedes be our guide, dualism is in effect established by examining the nature of knowledge *of the world*. The meditator is deemed dual as a consequence of the fact that he is deemed capable of achieving genuine knowledge. 'But', an objector is sure to interject, 'doesn't the *cogito* supply a certainty prior to any consideration of the relations between the meditator and the world? And doesn't the dualist conclusion have some basis in the *cogito*?'

The objection has already been adumbrated in passing. It was argued that whatever the independent philosophical worth of my talk of different kinds of object-oriented intensional structures, such

matters have nothing to do with the *Meditations*. The *cogito* establishes the meditator's existence in a doubt-proof way, and lays the ground for a proper determination of his nature, because of a special feature of thinking: the thinker cannot be mistaken about his wholly mental conditions. So even if it is true that the character of the knower and the character of the known are correlates, the truth is tangential to Descartes' actual reasoning, which pivots on the idea of mono-polar subjectivity.

To meet this charge, I propose to show, first, that should the apparent mono-polar character of subjectivity in the *cogito* be taken at face value, the wider Cartesian project would be in serious trouble, and second, that Descartes' treatment, to the extent that it seems to invoke subjectivity in the way described by the objector, trades on a deep-going equivocation which Descartes fails to notice, and for that reason fails to resolve.

As mentioned, one wants the dualist position defended by Descartes to be valid relative to what the Cartesian scientist knows; relative, that is, to the *total* content of his knowledge, not merely a part of it. As a result of an equivocation on 'knowledge' and 'certainty', the objector's construal of the *cogito* is incompatible with the satisfaction of the desire. So long as the equivocation passes unnoticed — and Descartes' mode of presentation renders it exceedingly elusive — it continues to seem that the knowledge which the *cogito* provides is indeed identical in kind to the knowledge comprised by the completed Cartesian scientific picture of the world; continues therefore to seem that the objector's reading comports well with the wider Cartesian programme. But once the equivocation is recognised, the absence of real uniformity, and with it the need for reinterpretation, becomes plain.

To root the equivocation out, we return to a point made early on in passing, viz. that PD, the principle of doubt, is best taken negatively, as the principle that what is not known with certainty cannot be rationally accepted. I suggested that there may be different ways in which certainty can be construed, and that the negative formulation is superior to its positive counterpart for keeping us alive to the fact. Here is where the suggestion proves its worth.

For Descartes, a subject can be said to be 'certain' about some object or state of affairs just in case his evidential condition leaves open no counterfactual possibilities of gaining direct evidence about the object or state of affairs. This can occur in two entirely different types of case. It can occur if, with respect to an object or state of affairs concerning which diverse possibilities exist of gaining direct evidence, all the direct evidence is in fact in the subject's possession (this would seem to be God's position *vis-à-vis* the corporeal world). But it can occur also if the object or state of affairs lacks complexity in its (direct) evidential basis; if, in other words, there are no 'diverse possibilities' of gaining direct evidence about it. Mental conditions such as pain fall into the latter category.

A subject in pain is in an authoritative position about his condition: no other subject can point to evidence relevant to his belief about the pain state which might lead him to say, for example, 'My impression is of an intense pain; but in virtue of the evidence you cite perhaps it is mild'. This principled evidential superiority isn't to be explained by claiming that the subject in pain takes up every possible evidential vantage point *vis-à-vis* the state and hence that no other subject can be in possession of additional direct evidence. Rather, it is to be explained by indicating that where sensations are concerned there is no *point d'appui* for the phrase 'counterfactual possibility of gaining direct evidence'; there are no vantage points at all with respect to the state.

Cases of both types might informally be ranged under a single banner: 'no counterfactual possibilities left open by the holder of the belief'. But these words disguise a fundamental difference. In cases of the one type the absence of direct evidential alternatives is due to the fact that all of the evidential bases have been covered; in cases of the other type, there could be no such alternatives. To mark the difference, let us call the kind of certainty achievable in a case of the first sort 'o-certainty', with 'o' emblematic of 'object'. The certainty achievable in the second kind of case can aptly be called 'm-certainty', with 'm' emblematic of 'mental'.

On the reading of the *cogito* I am challenging, on which the knower-known correlation doesn't inform Descartes' thinking,

Descartes exploits the notion of m-certainty to justify the claim that the meditator is in possession of a piece of knowledge that is certain. Because thinking is like pain self-revelatory, the meditator cannot be mistaken in his belief that he is cogitating.

Given the distinction between m-certainty and o-certainty, the problem facing Descartes is plain, if this is how he is finally taken to be arguing. The principle of doubt, PD, obliges the rational subject to accept only certainties. If 'm-certainty' is meant by 'certainty', then the *cogito*, as traditionally read, would mark the *Meditations*' endpoint. At the start of Meditation 3 Descartes himself states that the *cogito* supplies a model — a 'paradigm' — of truth. On its basis 'already I can establish as a general rule that all things which I perceive very clearly and very distinctly are true' (/158). But if the m-certainty of the meditator's belief that he is thinking constitutes the basis for the 'general rule' — if that rule is paradigmatically exemplified by the m-certainty of the *cogito* — then the total knowledge possessed by the meditator will have to consist exclusively of m-certainties or certainties capable of being reached on an m-certain basis. Not a single o-certainty could conceivably work its way into the company.

To be sure, faced with the vertiginous fissure between m-certainty and o-certainty, the interpreter has a number of choices. He can maintain that Descartes really has been fooled by the apparent univocal applicability of the words 'no counterfactual possibilities of gaining direct evidence' into thinking that m-cases and o-cases are mutually accessible. But selecting this depressing option, which therefore implies that all the results reached beyond Meditation 2 are vitiated by, because indebted to, the equivocation, must rank a poor second to selecting the option worked out in preceding pages. This of course requires that some of what Descartes says about the *cogito* be evaluated as misleading. But painful choices must be made irrespective of how the case as a whole is construed. And, I believe myself to have shown, there is a great deal of evidence in the texts which supports the present appraisal.

One last comment may be set down to quell lingering unease about the correctness of this trade-off. The argumentation of the

Meditations is, we saw, informed by a realist conception of truth. Descartes discards sense-based factual propositions on the grounds that they resist realist truth-evaluation. The reader who demands consistency therefore has the right to expect that all the 'certainties' which Descartes claims to reach when he moves to construction will be true in a realist sense. But if the nature of m-certainty is carefully considered, it emerges that the realist notion of truth makes no sense here at all. A state such as pain is known by the subject in an m-certain way because its evidential grounds are identical with it; because the subject's evidence that his pain is, say, intense is the intense pain itself. This is however a limiting anti-realist case, not a paradigm of realism, since sense cannot be attached to the idea of the state known which prises it apart from the evidence on the basis of which it is known. Indeed, the case of pain is exemplary of the kind of case phenomenologists rely upon in attempting their anti-realist foundationalist reconstructions. But a phenomenalist style of reconstruction is quite out of keeping with the true thrust of Cartesianism in its constructive aspect.

11. Existential neutrality: a red herring

All doubt should by now have dissipated that the issue of existential neutrality is an irrelevance. I commented earlier on the importance Descartes appears to attach to securing the existential neutrality of the wax-experiment. But it isn't lost on him that seemings are also susceptible of existentially neutral construal. So even if existential neutrality is granted throughout, Cartesian dualism would still be a casualty unless Descartes could show that his conception of the wax isn't a function of existentially neutral seemings. Otherwise, he would be forced to concede that it irrevocably seems to the meditator as if he is locally extended; i.e. as if he has a body. The kind of argument framed in Meditation 6 for matter's existence — the argument from the fact that 'God is no deceiver' (/191), and hence that ideas produced in the meditator which seem to issue from corporeal causes must so issue — would then apply to show that the

meditator must possess a body. If not, God would be guilty of deception in so arranging matters that it seems to the meditator as if he possesses one. In fact, Descartes comes very close to making the point explicitly in this Meditation. Concerning 'faculties [in me] such as that of change of position', he observes that they 'cannot be conceived ... apart from some [material] substance to which they are attached, and consequently cannot exist without it' (/190). Immediately he adds: 'these faculties, if it be true that they exist, must be attached to some corporeal or extended substance' (/ibid.). In light of the last conditional, the point about the inconceivability of the mentioned faculties divorced from material substance is existentially neutral. The remark has therefore to be interpreted as follows: if it seems to me, insofar as the deliverances of my mode of cognition go, as if I have such faculties, then it seems to me as if I am, *qua* cogniser, embodied. If my representative states, taken as existentially neutral, are in their intensional structures identical to the states of a subject who occupies specific and successive spatial stations *vis-à-vis* a material object, then on that evidence I would have to draw the conclusion that my embodiment is irrevocable.

Though Gassendi's pointed objections force Descartes to sharpen his formulations in *Replies* 5, he nevertheless makes an important slip. After explicitly indicating to Gassendi that the wax-experiment helps to clarify the meditator's nature — he is referring back to the claim in Meditation 2 that 'all the reasons which contribute to the knowledge of wax ... are ... proofs of the nature of my mind' (/157) — Descartes proceeds: 'Just as in wax we are able to distinguish many attributes, one that it is white, another that it is hard, a third that it can be liquefied, etc., so also in mind we can recognise as many — one that it has the power of being aware of the whiteness of wax, another that it possesses the power of recognising its hardness ..., etc.' (*Replies* 5/213). But isn't it a considered Cartesian view that whiteness isn't really a material characteristic? The conception of material objects as coloured is a pre-scientific 'vulgarity', part-and-parcel of the probable, sense-based, view of things, and hence is incompatible with the truth of dualism. A subject who can literally be aware of 'the whiteness of wax' cannot be a mind in Descartes' sense. Evidently, Descartes is

here overlooking the distinction, which he takes such care to tell Hobbes that the wax-experiment is designed to make, between 'the features in wax ... given by the imagination and those solely due to a conception of the mind' (*Replies* 3/66). Assuming that whiteness has some place in the Cartesian scientist's picture of the world, the wax-experiment, to yield an advance, must provide a basis for showing that the colour is not a feature of the body. Now the proper status of colour should be establishable without assuming that coloured things exist. As we now see even more clearly than before, there is therefore a pair of distinctions here, not one distinction only: first, the distinction between existential commitment and existential neutrality; second, the distinction *on either side of the preceding distinction*, between the intensional structure of seemings and the intensional structure of 'pure thought', which last cannot be described in terms of the 'R = V(o)' schema. It follows that if we take seriously Descartes' claim that 'certainly ... I possess a body' (Meditation 6/190), there is no longer any need whatever to insist on existential neutrality, and Descartes' concern to ensure it in Meditation 2 reflects nothing but the fact that the earlier stages of his argument precede its later stages.

Interpreters who see Descartes' dualist reasoning in Meditation 2 to rest on the certain existence of mind and the possible non-existence (= the uncertain existence) of body are quite right to cry foul. But Descartes' doesn't commit this gross modal fallacy. Even had body's existence explicitly been acknowledged by Descartes in Meditation 2, as it is in Meditation 6, to be at par in certainty with mind's existence, thereby expunging from the text one of the premises essential to the invalid argument sketched, the reasoning for the real distinction would still have unwound essentially as it unwinds. For the reasoning is in fact routed through a consideration of the character of 'clear and distinct' cognitive activity.

The implication for the *cogito* is plain. Descartes' thinking here will be distorted beyond redemption if the reader allows himself to be influenced by the latter-day problem of 'other minds'. So far as the relevance of the *cogito* to dualism goes, the operative contrast isn't between mental and psychological states and conditions and non-

mental or physical ones. Granting that God is the 'active' subject *par excellence*, it also has to be granted that the notion of subjectivity which informs the *cogito* isn't the notion of mono-polar subjectivity which connects up with m-certainty. Examine this pregnant passage: 'all that which can be known of God may be made manifest by means which are not derived from anywhere but from ourselves, and from the simple consideration of the nature of our minds. Hence I thought it not beside my purpose to inquire how this is so, and how God may be more easily and certainly known than the things of the world' (*Meditations* Dedication/134). Obviously, we are not here in the orbit of m-certainty; it would be absurd to try to explain the 'ease' with which the divinity is known by lumping him together with the mediator's pains. Descartes' notion of personal subjectivity is clearly influenced by the belief in an 'affinity' between human and divine mentality. It is no mere literary fact that the very idea of meditation, qua project in which the subject undertakes, free of external pressures, to 'execute his own design' (see Discourse 1/83), resonates with the idea of a divine design (see *ibid.*/90-4).

IV Ideas and Ontology

Descartes' positive conception of knowledge — 'certain' as distinct from 'probable' knowledge — is investigated from an ontological viewpoint. The world of the Cartesian scientist is shown to have an ontology different from the ontology of the sense-experiencer. By close scrutiny of the texts, it is demonstrated that the instruments of an 'adequate' style of cognition — 'ideas' — are such that their objects — 'ideata' — must be, in a special sense, substantial entities (or their mereological components). Descartes therefore overstates his case by continuously describing the representative instruments of the Cartesian non-scientist (the sense-employing or 'probable' cogniser) as 'unclear and indistinct ideas'. Descartes' account of mundane cognition is independent of his positive views about 'real knowledge'. The ontology of the former should therefore have been described by him in a language which does not relate it *ab initio* to the ontology of the full-fledged Cartesian scientific portrayal of things.

1. 'Idea': asking the right question

The disjointness of probable and certain knowledge is essential for the success of Descartes' destructive reasoning in the *Meditations*; it is also the ultimate source of the invalidity of his overall conception. The pull of opposed forces is easy to feel. Unless 'probable knowledge' classifies knowledge of a distinctive kind, 'certain knowledge' knowledge of another kind, equally distinctive, the move could not validly be made from the fact that a given proposition is known only probably to the conclusion that it will not eventually be found to be part of the 'certain' or scientific representation of things. But if probable knowledge has its own distinctive character, why is the probable cogniser rationally obliged to replace the propositions comprising his conception of things by something else? Think here of Descartes' parallel between the art/science and the probable/certain dualities. A Cartesian artist will agree that because he treats his subject-matter in a characteristic fashion, his results aren't scientific in Descartes' sense. However, he may say that his concern with the subject-matter is

artistic, not scientific, and hence that the contrast here, though genuine, lacks critical bite. Those Descartes takes to task may in other words resist his strictures by maintaining that their approach supplies them precisely with the kind of information about the world they want.

The point can be recast less informally with the aid of the ' $R = V(o)$ ' schema. Descartes requires that scientific cognition overcome the influence of V , this being a necessary condition for achieving co-incidence between R and o . But why can't a coherent, autonomous, conception of experience and knowledge acknowledge The V -parameter? And, of course, the pressure to acknowledge it will build as the coherence of the idea of eliminating V comes to be queried. An unrelenting critic might express himself by remarking that the o -component of the schema is understood in the first place, and throughout, only in the context of the schema; that the o -conception Descartes requires is 'transcendent'. We can agree — the critic will say — that one representation R_1 differs from another R_2 accordingly as V alters. But in making such comparisons, we are considering R s all of which are under the influence of The V -parameter; we are not measuring V -influenced R s against a V -uninfluenced R and judging the former inadequate because they diverge from the latter. The importance of a piece of text such as the wax-experiment can better be gauged once this crucial objection is advanced. Rightly or wrongly, Descartes believes the experiment to show that the mind operates in terms of specific object-directed intensional structures, and hence believes that the assessment of V -influenced R s of o can be undertaken in terms of a V -uninfluenced R thereof. But Descartes could not have been so sanguine as to think that his overall case about 'scientific' knowledge of the world could be rested on this and nothing more. One swallow does not make a supper. Nor is 'this piece of wax' the world. The experiment is at best a signpost pointing towards a certain (ideal?) terminus. More must be done in order to secure the idea of such a terminus; and even if that idea can be effectively secured, more yet must be done to assure that the terminus can be reached.

This chapter initiates a protean investigation of Cartesian ideational representation, with the goal of making precise the difficulties

surrounding the crucial Cartesian contention that the workaday or 'probable' conception of things cannot rationally be abided. The feature of Descartes' treatment of ideas which holds a special interest will emerge once a widespread misunderstanding of the historical texts is noted.

The following vital fact about Descartes' position — indeed, about a large number of post-Cartesian positions up to Kant — keeps eluding interpreters and critics. Descartes' handling of the notion of an idea is internally bound up with the contrast between a proper — a certain — and an improper — a probable — grasp of reality; his understanding of ideational representation isn't neutral on this contrast.¹ So one way of enquiring into the relationship between probable and certain knowledge is by probing the links between modes of representation which fall short of ideation and ideational modes proper; by examining the points of contact and divergence between vehicles of representation which and ideas are those which aren't.

One reason for the indicated failure on the part of Descartes' readers is his own insecure grasp of the precise character of the relationship. But another reason, for which Descartes cannot fairly be faulted, exercises a baneful influence. This is the perennial — and to judge by the literature irresistible — tendency of Descartes' modern investigators to focus on Cartesian ideas hypnotised by an overly specific epistemological preoccupation. Descartes states: 'we cannot have any knowledge of things except by the ideas we conceive of them' (Letter to Gibieuf of 19 January 1642/124). The question may be asked — and I take it that no serious student needs to be told that the question is invariably asked in the context of treatments of what is typically described as Descartes' *representationalism* — how Descartes can know that the ideas possessed by the meditator give an accurate portrayal of an outside reality. But we have already seen that Descartes designates certain intensional structures, certain 'modes of thinking', as superior to others in respect of the imperatives of knowledge and science, and that he does so quite apart from a

1. I will show in the concluding chapter how this internal link can be confirmed on broadly etymological grounds.

provision of a satisfactory solution to the difficulty. Once his practice here is understood, it should immediately become clear why over-concentration on the epistemological question leads willy-nilly to a damagingly slanted reading of the texts. Whatever ideas might be — whatever kind of representation ideational representation is — the epistemological question will be posed solely because ideas *mediate* between the conscious subject and his object. One who leaps to raise the epistemological question as soon as he hears the word 'idea' will therefore ignore another question. Dominated by the difficulty Descartes has in determining *whether* ideas, which purport to represent, actually represent anything at all, he will overlook the independent question of *how*, i.e. *in what way*, ideas purport to represent. Descartes has a great deal to say about this, and what he says is separable in logic from whatever he might have to offer in addressing the epistemological question.

I am going in what follows to ignore the 'whether' question. I will show that Cartesian ideas are representational instruments of a quite specific kind, and that a good deal of what Descartes says falls neatly into place consequent upon a recognition of the fact (which is not of course to say that Descartes' thinking here is defensible).

2. *Ideas and truth*

Complete onus for the widespread failure to recognise the non-epistemological meaning that attaches to the question 'How do ideas represent?' cannot be laid at Descartes' door. But only a blind disciple could maintain that the textual position is clear. 'Of my thoughts', Descartes states at one point, 'some are, so to speak, images of the things, and to these alone is the title "idea" properly applied' (Meditation 3/159). Later, we come upon what seems to be a total *volte face*: '*Idea* is word by which I understand the form of any thought, that form by the immediate awareness of which I am conscious of the said thought.... And thus it is not only images depicted in the imagination that I call ideas; nay, to such images I here decidedly refuse the title of ideas, in so far as they are pictures in the

corporeal imagination' (*Arguments Drawn up in Geometrical Fashion*/52).

This instability in Descartes' handling of 'idea' is bound to affect the reader's ability to attach an unequivocal sense to any question containing the term. Still, without attributing to Descartes' formulations a clarity they really do not have, I believe it can be shown, even with reference to the *prima facie* clashing passages just quoted, that his thinking is less confused than first appears.

In the passage from the *Meditations* the concern uppermost in Descartes' mind is to distinguish truth-evaluable representative states from states of desiring or willing, to which truth values cannot be assigned. Since the *accuracy* of an idea can be considered — its *correspondence* with some objective state of affairs — and since it isn't accuracy but only, say, *appropriateness* that can be spoken of in a case of desire, Descartes does have a genuine enough distinction to make. This is borne out by the more formal classification at *Principles* 1.32: 'sense-perception, imagining, and conceiving things that are purely intelligible, are just different modes of perceiving; but desiring, holding in aversion, affirming, denying, doubting, all these are the different modes of willing' (/232). But in the *Arguments* Descartes' purpose is not to distinguish representative states which can be assessed for truth value from those which cannot, but to make a distinction among the former. And so, he withholds the appellation 'idea' from images.

Why does Descartes feel a need to distinguish among truth-evaluable states? Answering the question will sharply illuminate the neglected sense of 'How do ideas represent?' Descartes feels the need to make a distinction here by way of indicating that the term 'idea', strictly understood, exclusively classifies those states which are (potentially) evaluable as true, *as opposed to evaluable as (merely) probable*. Examine this claim: 'if the word thought be taken indifferently for every psychical operation, it is certain that we can have many thoughts, from which we can infer nothing relative to the truth of matters outside of us. But that...is not to the point here, where the question concerns only those thoughts that form clear and distinct perceptions' (Letter to Clerselier concerning *Objections* 5/128). In

Meditation 3, we just saw, 'idea', precisely understood, means 'form of thought from which we can infer to the truth of matters outside of us'. 'Thought', in this precise sense, is also called 'pure thought' by Descartes.² The exact force of 'pure' can be pinned down with the help of the ' $R = V(o)$ ' schema. A truth-evaluable representative state will be 'pure' just in case o and R co-incide; impurity intrudes where, typically as a result of the effect of V , R diverges from o . This is confirmed by Descartes' wording above. Ideas, in their representative content, are relativised to 'the truth of things'. In the case of an idea, R is a direct reflection of o . So where thoughts do not count as a proper avenue to knowledge about the world, the flaw is due to the influence of the V -factor on their representative content.

3. *The grammar of 'idea': ideata are substances*

A cognising subject can be said to have an idea — to be ideating — when the representative content of his consciousness is adequate to the state of the world. (Let me reemphasise the difference between adequacy and truth. An adequate representation is one that could in principle be evaluated as true. But it may also turn out to be false. The inadequacy of a representation mustn't therefore be confused with its falsity. To say that a representation is inadequate is to say that it couldn't be more than probable, which is of course compatible with its either being very probable or very improbable.) Aside from repeating that the representative content of a subject's consciousness will be adequate when R and o co-incide, what can be set down by way of informatively specifying the conditions a representation must meet in order to qualify as an idea? An answer emerges if we consider the close interrelation between ideas, on the side of representing consciousness, and substances, on the side of the represented world. These, we find, are strict correlates.

In everyday speech there would be nothing at all odd in saying of a

2. In *The Passions of the Soul* Descartes' formulations about this matter are considerably sharpened. We shall look at some relevant passages below.

cogniser that he has 'an idea' of (an object's) shape or texture. This means only that he knows what that shape or texture is — can recognise the shape or texture when he encounters an object which has it, can compare and contrast objects in respect of the feature, and so on. Although important qualifications will have to be added below, the large point about ideation is then this. If (what I shall call) *the official grammar* of 'idea' and its cognates is adhered to, Descartes would disallow such a description of cognitive condition. Despite the impeccability of the above mentioned sayings in the context of unguarded parlance, no subject can be said to have, in the official sense of the term, 'an idea' of shape or texture. I do not maintain that Descartes is scrupulously observant of this official prohibition in his own formulations. Far from it. As already shown, he quite knowingly permits himself to use 'idea' in inexact or 'vulgar' ways, e.g. to cover images. Restated with this in mind, the large point is that in the name of Descartes' own deeper principles a distinction must be enforced between representative states which qualify as ideational and those which don't.

What is the source of Descartes' commitment to disallowing that a cogniser can be said to have an idea of a property like shape? To a first approximation: because shapes are essentially the shapes of objects, objects which are not themselves shapes, but which are shaped, or have shapes — because, in short, shapes are ontological dependencies — there can be no ideas of them.³ In confirmation, the following piece of evidence may be entered: 'we easily apprehend figure, without thinking at all of circle (although the mental act is not distinct unless we refer to some specific figure, and it does not give us a complete thing, unless it embraces the nature of the [figured] body)'

3. Just above, I indicated that qualification would have to be made to the claim that Descartes disallows the phrase 'idea of a shape'. Similarly, this answer is only 'a first approximation'. In terms familiar to us, the problem here is as follows. It is unclear how some thought-content's representing an ontological dependency links with the 'R = V(o)' schema. In due course, we shall see that Descartes is willing to speak of ontological dependencies as (possible) ideata, providing these dependencies are, in a sense to be explained, *monopolar* dependencies of substantial entities, i.e. providing their status as dependencies has nothing to do with the schema.

(*Replies* 4/99). While a subject can think of the shape of an object in this way, the 'act of thought' here is not 'distinct'. Because 'idea', strictly speaking, means 'form of a clear and distinct perception', the representative content of the subject's consciousness does not, in the case described, match the content of any idea.

Officially, 'idea' applies only to what Descartes denominates 'complete' or 'distinct' cognitive acts. An ideatum, officially, must therefore be a complete or distinct object. A representative state of consciousness which aspires to ideational status will fall short unless what it represents is of this kind. As a result, there can be no idea of an incomplete or fragmentary object. Only 'complete' objects, i.e. substances, are (possible) ideata.

It would therefore be erroneous to think that one's classification of a representation as distinct or complete accorded with Descartes' when it distinctly or completely represents its object in the way the pale pigments of a portraitist give an accurate or exact rendering of the pallor of his sitter's complexion. One who classifies in this fashion is employing terms like 'complete' and 'distinct', 'accurate' and 'exact', in an *ontologically neutral* manner, in the sense that his agreement that a representation portrays its representatum in these ways is entirely silent on what the latter might be. Thus, to recur to the passage quoted above, Descartes insists that to have *an idea* (i.e. distinctly to think) of a figure is *ipso facto* to have an idea of a body figured; such an idea is even said by him to 'embrace the nature of the body'. One who 'conceives' figure apart from body is not ideating it, even though his conception, of circularity say, be geometrically exact. (Consider here Descartes' early dismissal of those mathematicians who busy themselves 'with bare numbers and imaginary figures' (Rule 4/11). He is surely not disputing that they would accept Euclid's theorems.) Similarly, Descartes writes at *Principles* 1.61 that 'we cannot...have a perception of [a] mode [of substance] without perceiving the substance' (/244). Having allowed in *Replies* 4 that a subject can 'apprehend' figure despite giving no thought at all to the figured body, Descartes may seem to be asserting a point and asserting its opposite. The appearance of inconsistency vanishes once the synonymy of 'having a perception' with 'having a clear and distinct

perception' or 'ideating' is recognised. Descartes never denies that a cogniser can represent the world in less than an adequate — a 'clear and distinct' or 'complete' — fashion. His view is that most of us are in the regrettable position of doing so most of the time. On the strength of the lines examined, 'apprehending' names an inadequate style of world-representation.⁴ Descartes can thus allow that what is impossible in any *bona fide* case of ideational representation may very well hold for a representing subject whose states fall short of ideational requirements, i.e. one who apprehends the world.

The claim that a representation 'clearly and distinctly' represents its object — the claim that the representation is an idea or, for preference, that the cognitive condition of the representing subject is ideational — is not neutral on the ontological character of the object. To ideate is to represent or conceive via a 'distinct' act of thought. *And such acts must have complete or distinct objects, i.e. substances, as their representata.* That terms like 'clear', 'distinct', and 'complete' cannot be construed in an ontologically neutral fashion is conclusively verified by Descartes' explicit assertion that 'to understand in a complete manner' and 'to understand that a thing is something complete' mean the same (*Replies* 4/98). Immediately he adds: 'by a complete thing I mean...a substance endowed with those forms or attributes which suffice to let me recognise that it is a substance' (*ibid./ibid.*). To be sure, nothing prevents talk of 'having an idea of a non-substance'. But such talk is loose and inexact. While Descartes himself often speaks in the informal way, he is relatively judicious to underline its principled inexactitude when pressed. Witness the response to Arnauld: strictly speaking, he explains, one who genuinely 'has an idea' of a non-substance, e.g. of a substantial mode, *ipso facto* cognises the substance to which it attaches.

4. Indeed, we shall see later on that a relatively systematic distinction between *apprehension* and *comprehension* appears throughout the Cartesian *corpus*. Compare the above claim about the cognising subject's ability to apprehend figure without cognising some figured body with the remark that 'a mode...can by no means be comprehended, except it involve in its own concept the concept of the thing of which it is a mode' (*Notes Against a Programme*/440).

This has direct implications for, and hence enables us further to sharpen, the neglected sense of the question 'How do ideas represent?' In claiming that the cognising subject who possesses an idea can 'infer to the truth of outside matters' Descartes is maintaining far more than this, that an idea is an accurate or exact rendition of its object. The accuracy or exactitude of a representation, on the normal understanding of these assessments, is compatible with the represented item's not belonging to a realist conception of things. Suppose that the non-realist analyses of material object discourse sketched in chapter 2 is correct. A material object proposition, construed non-realistically, could then be said, in the normal sense, to be an 'accurate' or 'exact' representation of the objective state of affairs. Descartes' claim is far more substantial. An idea is a representation of a type adequate to the realist character of the world. One can infer from such a representation to 'the truth', not merely to 'the probability', of things. Evidently, a critic who attaches to the above question only its epistemological sense, viz. How can it be *known* that there are ideata corresponding to ideas? , would overlook these implications. For him the question arises simply because ideas are representational instruments which mediate between consciousness and its objects, and hence the issue of the objects' natures is irrelevant.

Armed with this result, and availing ourselves of a curious phrase which appears in many classical texts, we can frame a very neat formulation of the essence of ideational representation. Consider Spinoza's dismissal of our standard conception of the world as a plurality of discrete substances on the grounds that it is the product of our conceiving the world 'in the abstract and superficially, as we imagine it; [rather than] as substance, as we conceive it solely by the intellect' (*Ethics*1P15N). The standard conception is mistaken, in other words, because it results from our cognising the world otherwise than 'from th[e] point of view of substance' (ibid.). The *prima facie* oddity is glaring. If there is a 'point of view', must it not be that of the experiencing subject? Only a subject takes up a viewpoint *vis-à-vis* an object cognised. So Spinoza is preferentially counterposing what is not really a point of view at all, viz. the point

of view of the object cognised — of substance — to what the phrase ‘point of view’ normally denotes. A similar usage can be found in Descartes, e.g. at Rule 12/40. Neatly then, *ideational representation is representation from the point of view of substance*. Obviously, such a mode of representation is one which eliminates the V-parameter. It is a mode in which the cognising subject is brought into co-incidence, in respect of the representative content of his consciousness, with the object cognised.

The shift from epistemological to ontologico-semantic terms will enable us to achieve much needed resolution concerning the reasoning underlying Descartes’ contention that the condition of the probable knower is rationally insupportable. Since the ontology here cannot fully be understood independently of the semantics, the present ontological chapter awaits the semantic materials of the next for essential complementation. The impulse for shifting to ontology is imparted by the thesis, attributed in past pages to Descartes, that the notion of an idea, construed in a strict fashion, isn’t indifferent with respect to the character of the objects represented. It follows that non-ideational representata differ from ideata proper. The relation between the probable and the certain will be illuminated by an account of the ontological difference.

Assuming that ideas and substances are correlative, it may seem that extended enquiry into the relation can be abridged. If ideata are substantial entities, and if, in light of the contrast between ideas and non-ideational instruments of representation, the objects of the latter aren’t substances, doesn’t it follow that the relation between the two is the relation of substances to nonsubstances?

To rest with such a description would be unsatisfactory for three reasons at least. First, to say of an item that it is non-substantial is to say what it is not; but we want to know what the world comprises as represented by the probable cogniser, not merely what it fails to comprise. Second, saying that the probable subject represents the world as containing non-substantial items has no power to explain why Descartes thinks him rationally remiss. Third, and most important, to begin with the correlation between ideas and substances is to reverse the proper order. Descartes’ stress on the

certain or scientific conception of things notwithstanding, the probable or uncertain conception, warts and all, is closer to our ken, 'I am in a sense something intermediate between God and nought I find myself subject to an infinitude of imperfections' (Meditation 4/172-3). Neither the wax-experiment, which is after all only a monogram of adequate cognition, nor the metaphorical description of adequate cognition as being 'from the viewpoint of substance', supplies full literal content to the former. The significance of the explanatory shortfall here for the interpretation of Descartes' position can scarcely be overestimated, and it will now get a bit of the independent consideration it needs. Some of the complexities of the discussion to follow, which might otherwise strike the reader as excessive and contrived, not to say perverse, will be prepared for in this way.

4. *Referring the probable to the certain*

No matter how hotly interpreters of the Cartesian position contest with each other on points of detail, all will agree that there is some sense in which, according to Descartes, the probable knower is representing the self-same reality as the cogniser who has won through to certain knowledge. But there is more than one way of construing this *reference of the probable to the certain*. On an *immanent* construal of the reference, it would be argued that the probable cogniser's world-representation is marred by an internal flaw, and hence that he is capable of appreciating, on the basis of careful reflexive examination, that he is under an obligation to try to do better. In other words, even prior to the probable cogniser's being in a position to say what it (really) is that he is representing (only) in a probable manner, he can already determine that his conception of things is imperfect, and hence recognise that he must make a further effort.

The immanent construal is bound to suggest itself first to the uncommitted reader. But our reconstruction of the negative argumentation of Meditation 1 shows it to be an option closed to Descartes. In the course of that reconstruction it emerged that a sense-

based or probable mode of cognition is evaluated as inadequate by Descartes not primarily because it results in an inadequate representation of the (real) nature of things, but rather because it supplies a view of things as knowable probably, i.e. a view of knowledge as an affair of intrinsic probability. Indeed, we saw that the critique of the senses would succumb to low-level charges of logical invalidity were it resistant to reformulation in terms of intrinsic probability. And from the fact that the negative thesis must therefore be formulable without reference to the notion of certainty, it follows that no immanent treatment of the condition of the probable cogniser could effectively establish that he is obliged to work towards certainty.

So the manifest form of Descartes' treatment of the reference of the probable to the certain is pervasively misleading, since the immanent construal is suggested by the various phrases he employs in rough synonymy with 'probable conception'. An adjective like 'fragmentary' immediately points beyond itself to that which discharges the fragmentariness; 'vulgar conception' seems naturally to invite gloss as 'conception which vulgarises something else', and 'inexact or imperfect conception' as 'conception of something not itself marred by inexactitude or imperfection'. Each of the phrases appears *ab initio* to refer the content of a probable conception of things to a conception which is certain. In freely employing them Descartes thus creates the impression that the probable knower, qua vulgariser, imperfect conceiver, etc., can, by isolated self-examination or immanently, recognise the flawed nature of his domestic condition.

Descartes undeniably exploits the natural associations of the listed phrases in aid of his dissatisfaction with the probable. This exploitation, to the degree that it is theoretically irremoveable, jeopardises the Cartesian project at its very first stage. True enough, probability and certainty normally stand to each other as counterparts: 'probability', as one philosopher puts it, 'is an approximation to certainty'.⁵ But the reciprocity holds only for the

5. Kant, *Logic*/89.

truth-neutral notion of probability, while Descartes' negative reasoning about the senses operates with the truth-involving notion. No matter how critically irresistible it may sound to state that the beliefs of the sense-reliant cogniser are *only* probable, or are *no more than* probable, these statements lack immediate critical force. Because truth-involving probability differs from, without being a direct counterpart of, Cartesian certainty, the operative content of each statement is its descriptive content.

It follows that Descartes' criticism of the condition of the probable knower must be *transcendent* in character, not immanent.⁶ To illustrate the relation between probability and certainty in the Cartesian system, we can avail ourselves of an analogy used above. The condition of the probable knower may be likened to that of a subject who owns a table rather than a chair. Just as incanting 'A table is not a chair' in his ear will in no obvious way impel him to try to replace the item of furniture he possesses by the one he does not have, so apprising the probable cogniser of the difference between his conception of things and the certain conception will not effectively move him to strive for a change in his condition. It would be an entirely different matter if the table owned by the probable cogniser's analogue were flawed, e.g. if it were missing a leg. To indicate to him that the table he possesses could not serve his purposes would, we may anticipate, prompt him to act. But despite Descartes' use of phrases like 'imperfect conception' in describing the probable knower — a use which suggests an analogous internal flaw in what he possesses — it is the former parallel, not the latter, which more accurately reflects the real state of affairs.

Despite having made disappointingly little progress towards determining how the probable comes to be referred by Descartes to the certain, we do have a negative result in hand. Should the texts support no answer other than 'Immanently', the Cartesian position will go to the wall. On an immanent construal of the reference,

6. It is transcendent from the viewpoint of the probable cogniser. It does not follow that Descartes' criticism is transcendent *simpliciter*, as was suggested by the 'unrelenting critic' of section 1, though this may be true too.

'probable' must be understood truth-neutrally. But the success of Descartes' critique of the senses requires 'probable' consistently to be taken in its truth-involving meaning. So if Descartes believed the reference to be immanent, he would have to be trading on the ambiguity of 'probable' incompatibly with the correctness of the belief.

The shift to ontological and thence to semantic terms of discussion is designed to show that the immanent route is not travelled by Descartes. This will confirm that the quick statement of the ontological relation between the probable and the certain adumbrated at the close of the preceding section is interpretationally unviable. If the immanent route is avoided by Descartes, a basic description of the ontology of probable cognition will not make essential reference to the (different) ontology of adequate or certain cognition. It will in other words be possible to spell out the ontology of the probable without making mention of the ontological content of the certain conception of things — and this is precisely what the quick statement fails to do. Having already indicated that the surface form of Descartes' discussion is often misleading here, my task is to spell it out for him, though it is only charitable to say that his words do on occasion point in the right direction. Witness the claim from Discourse 2 that in the course of methodical self-examination 'opinions' initially held will 'be replaced, either by others which were better, or by the same, when I had made them conform to the uniformity of a rational scheme'(/89).

5. Non-ideational representations and non-ideata

A subject who has attained to Cartesian certainty is a subject who represents the world by means of ideas: instruments of representation from which inference can safely be made to 'the truth of outside matters'. By establishing the precise difference between ideas and the representative instruments used by the probable cogniser, we are to settle the relations between the probable and the certain.

The claim that the probable cannot be referred to the certain on

immanent grounds implies the following ontological thesis: the objects of probable conception are not the objects conceived by the subject who has won through to Cartesian certainty. From the description of a subject's beliefs as 'probable' in the truth-involving sense it can be inferred that the objects on which these beliefs bear are of a distinctive kind — 'probable objects' we might say.⁷

Those who read Descartes' referral of the probable to the certain immanently are bound to raise a storm of protest. We can clarify the preceding point to advantage by airing their objection. Specifically, they will complain that arguing from the probability to a sense-based cogniser's beliefs to an ontological distinction between the objects on which these beliefs bear and the objects about which the Cartesian scientist holds beliefs is like arguing from the fact that a picture of a bathing beauty is blurred to the conclusion that the bathing beauty is herself blurred, and hence is distinct from any bathing beauty pictured by a sharply defined photographic representation. 'Obviously', the protestor insists, 'it isn't the object represented, only the representation of it, that is blurred; *mutatis mutandis*, the probability of a cogniser's conception of things doesn't bear on the identity of the objects conceived'.

Incontestably, transposing 'blurred' from 'blurred picture of a bathing beauty' to 'picture of a blurred bathing beauty' is an error. But the similarity in meaning between 'blurred' and terms like 'confused' and 'indistinct', which belong to the same family as 'probable', is only skin deep; so once the *mutanda* are *mutata* the protest's cogency is undermined. Two facts are especially pertinent here. Our reconstruction of Descartes' sense-critique by means of the notion of intrinsic probability indicates that calling a proposition about the world intrinsically probable is making a comment about the proposition believed, not (merely) characterising the belief

7. There is a logical gap between claiming that the objects of certain knowledge are not conceived by the probable cogniser and claiming that the probable cogniser conceives objects of a different kind. The first claim can be true, the second false, if the probable cogniser doesn't conceive any objects. It would be a trifle pedantic to worry about the gap just now, though I will address it below.

reposed in it by the subject. Also, some among Descartes' synonyms for 'probable' have associations different from those attaching as a matter of course to 'confused', 'indistinct', and to a term like 'blurred'. The blurredness of a picture can only jokingly be taken as a reflection of what is pictured. But it is quite possible that when a representation is described as 'incomplete' or 'fragmentary' it is so described exactly because what it represents is incomplete or fragmentary. When I say that a photograph of a building site gives an incomplete picture of the project I do not mean that some of the buildings physically present on the site have been cropped. My description thus bears on what is represented by the picture, not (only) on the picture thereof. Similarly, saying of a photograph of a table minus a leg that it is incomplete might well amount to saying something about the object.

If the adjective 'incomplete' functioned in Descartes' hands as does 'blurred' in 'blurred picture', the immanent character of the Cartesian referral of the probable to the certain would follow. A subject made aware that his representation is blurred already knows that he must do better. (A subject who couldn't be made aware of this would place himself beyond the pale of intelligent discourse.) May we conclude that the example of the picture of the table minus a leg illustrates the sense in which a representation counts for Descartes as incomplete? This would swing the pendulum too far in the other direction. It is true that the description of the mentioned picture as incomplete lacks immanent critical force — and so resists the preceding protest. But the gain here seems to be purchased only at the exorbitant cost of giving up all distinction between the way an incomplete representation represents and the way representation is achieved by one whose conception of the world is complete. What difference is there, *qua* picture, between a picture of a table missing a leg and a picture of a table with all its legs intact? If what the latter pictures were to be referred to a dining room suite, wouldn't it too qualify as incomplete? The problem is clear. The kind of incompleteness illustrated by the case of the table in no way attaches to the picture because of how it pictures — because of the kind of picture it is. So were this construal of 'incomplete' right, the condition of the probable knower would be

distinguishable from that of the Cartesian scientist only in the matter of scope or range: an impossible result by anyone's lights.

These complementary failures indicate that we require an interpretation of Descartes' term 'incomplete', as it functions in the course of his critique of the senses, which satisfies the following double-barrelled condition. The term must apply to a representation not merely because it applies, for independent reasons, to the item represented. (The example of the table violates the requirement, while the example of the blurred picture satisfies it only in the Pickwickian sense that the term 'incomplete' doesn't apply at all to the item represented.) It must in other words be the case that the representation has got to qualify as incomplete because of the kind of representation it is — because of its semantic character. Also, the term 'incomplete' must apply to the object represented because it applies to the representation of it. (Here, though in different ways, both examples fall short.) We might add a further condition which an interpretation can optimally be asked, without being strictly obliged, to meet, viz. power to explain why Descartes should have been so inclined to regard the incompleteness of a representation as an internal flaw in the condition of the cognising subject who employs it, and who hasn't (yet) won through to certainty. Since Descartes' actual failure fully to resist the inclination attests to a measure of confusion on his part, this condition, if satisfied, will be satisfied differently from the other two, i.e. by showing how one who is committed to an interpretation satisfying the pair could nevertheless have misconceived its character.

6. *'Incomplete ideas': the mereological relation*

For Descartes, saying that a subject's representation is incomplete is equivalent to saying that its representative content is a function of the subject's point of view. The incompleteness of a subject's representation under these conditions — it is bound up with the 'R = V(o)' schema — is in Descartes' view irrevocable. By polar contrast, saying that a subject possesses an idea, in the official meaning of 'idea',

is equivalent to saying that the representative content of his state of consciousness is free of V-effects. Ideas aren't disfigured by the preceding kind of incompleteness.

To assist in pinning down the exact sense of 'incomplete' as it figures in Descartes' critique of perceptual cognition — henceforth I will refer to this as *the technical sense* of the term — it is useful, in the absence of direct Cartesian guidance, to consider an implication thrown out when the contrasting claims above are conjoined. If the ascription of the claims to Descartes is correct, then should he ever use a phrase synonymous with 'incomplete idea', with 'idea' functioning officially, it follows that 'incomplete' in this usage couldn't have its technical meaning: ideational representations are in principle unaffected by the V-parameter, while the technical incompleteness of non-ideational representations is expressly due to the factor. On several occasions Descartes does employ 'incomplete idea' in the mentioned fashion. By seeing that 'incomplete' in these appearances is indeed non-synonymous with the term Descartes ascribes to the representations of the sense-based cogniser, the above claims will be confirmed and progress will be made towards explaining the term's technical sense.

In *Replies* 1, immediately after describing our normal 'image' of a thousand-sided polygon as 'confused' (/17), Descartes adds that we can have a 'clear and distinct ... image of a chiliagon ... if it takes in only one or two of the figure's sides' (/18). The application of the adjectives 'clear' and 'distinct' to a representative instrument indicates that the latter is an idea. (The conclusion is borne out also by Descartes' phrase 'act of vision' (/ibid.). As shall be shown in detail in VIII.4, 'vision' and 'idea' belong to the same family.) So notwithstanding Descartes' use of the word 'image', which often is counterposed to 'idea', he is here in effect characterising an ideational instrument of representation as incomplete. Because it takes in only 'one or two' of the thousand-sided figure's sides, the 'act of vision' gives no more than an incomplete representation of the polygon.

'Incomplete', as employed here, obviously has a highly attenuated sense. The 'image' described is not incomplete in any constitutional way, but only counts as incomplete — so Descartes informs us —

because it is referred to the chiliagon. Should the image be recharacterised as an image of, say, an open two-sided figure which either happens also to mark part of the boundary of an actual chiliagon, or can be made into such a boundary by further construction, then it would qualify for adjusted description as 'complete'.

The question is apt to arise: why should the image described as 'clear and distinct' have been referred in the first place to the thousand-sided polygon, rather than (only) to the two-sided open figure? Fortunately, the question need not detain us. No matter how it might be answered, the desired result would remain intact, viz. the result that in the gloss on the passage quoted 'incomplete' cannot be functioning in Descartes' technical sense. If this is not immediately clear, it can be made clear by a simple *reductio*. Suppose that the term does function in the gloss precisely as it functions when Descartes describes a sense-perceiver's grasp of things as 'incomplete'. The upshot would be that the attributed flaw in the latter's condition could be wiped clean away merely by altering the reference of his representation. All the rigours of Descartes' actual argumentation in denigration of a sense-perceptual mode of cognition would thereby be rendered otiose.

We are entitled to conclude that 'incomplete' doesn't have its technical sense here. Before explaining the term's exact purport, it is worth remarking that the case Descartes describes in *Replies* 1 matches the case of the table produced above in essential respects. I pointed out that 'incomplete', applied to the picture of the legless table, cannot be synonymous with the term Descartes employs during his critique of perceptual experience. The same claim is being advanced here again, as the following passage confirms. In *Replies* 4 Descartes considers 'the fact that certain substances are popularly called *incomplete substances*' (/99). He explains that the phrase is acceptable only when construable as per the following type of case: 'the hand is an incomplete substance, when taken in relation with the body, of which it is a part; but, regarded alone, it is a complete substance. Quite in the same way mind and body are incomplete

substances viewed in relation to the man who is the unity which together they form; but, taken alone, they are complete' (/ibid.).

These lines appreciably enhance our understanding of the example of the geometrical image. Descartes is insisting that the only sense in which a genuine ideatum can be styled 'incomplete' is a weak and uninteresting one. (This isn't to deny that a reader could find the anemic sense of the term interesting; only to contrast it with the sense attaching to the term as applied in the context of a criticism of perceptual cognition.) So by determining the precise meaning of 'incomplete' here insight will be gained into what its homonym, applied to the representations of the cognising subject who falls short of certainty, purports.

The examples indicate that the term 'incomplete', as it contributes to the phrase 'incomplete idea', has a *mereological* sense. Very roughly, two objects are mereologically related when one is a proper part of the other. Paradigmatic would be the case of a brick and a wall when the brick is one of many which compose the wall. Accordingly, to say that an idea is incomplete is to say that its ideatum is a proper part of a substantial item.

Formally, the examples of ideational incompleteness adduced above — those extracted from Descartes' texts as well as the ones framed by me — match the mereological paradigm. Each of the representations characterised as incomplete — the picture of the three-legged surface, the image of the two-sided open figure — represents a proper part of a wider whole. The picture represents a proper part of a fully constituted table; the image, a separable boundary portion of a fully constituted chiliagon. As for the example of the hand, where Descartes speaks of objects represented rather than representations, the mentioned item is one limb of a human body: a proper corporeal member.

The examples suggest the following two conditions to be jointly sufficient for ideational incompleteness. First, *qua* idea, i.e. *qua* 'clear and distinct' representation, the idea described as incomplete must have for its object an individual capable of standing on its own: a substantial entity. Second, that to which this ideatum is referred,

when the idea is described as incomplete, must be a more extensive substantial whole: a composite substance.

The hope is that the preceding elucidation of ideational incompleteness will illuminate the technical sense of 'incomplete' — the sense in which 'incomplete' links up with the ' $R = V(o)$ ' schema, and in which the term applies to the representations of the perceptual cogniser. To assure that we are on target it is therefore important to banish all doubt that ideational incompleteness, as Descartes understands it, is *unlinked* with the schema. This is accomplished without difficulty. In each of the cases treated it would readily be acknowledged that the incompleteness of the ideas so characterised is explicable 'from the point of view of the object'. The compositeness of the objects — their being wholes made up of a number of integral parts — has nothing whatever to do with the subject's viewpoint. And so R is not in these cases a function of V .

The complex condition specified two paragraphs ago for ideational incompleteness, a sufficient condition, is too restrictive to cater for everything Descartes has to say here. Common to each of his claims is first, that the incompleteness in question is presented as mereological in character, and second, that the whole is itself an ideatum. But these essential, i.e. necessary, features may be in force even where the item characterised as 'a whole' is not substantially composite, and therefore may obtain even where the complex sufficient condition does not. Some item A may be a proper part of another item B even where A is less than a substantial entity in its own right. Providing the remainder given by ' B minus A ' does not go beyond B , will not A be such a part? To do justice to all that Descartes says here, we must consequently generalise the condition for ideational incompleteness to read: a representation is ideationally incomplete if its representatum is a proper part of a more comprehensive ideatum. (Henceforth, I will refer to the notion of incompleteness connected with the restrictive condition as *the special notion*, and to the homonymous notion connected with the non-restrictive condition as *the general notion*.)

In sum, ideational incompleteness is mereological in character for Descartes. If any residual doubts remain, they should effectively be

quelled by citing another passage where the phrase 'incomplete substance' appears. Descartes informs us that one who asserts of specific substances that they are incomplete 'merely asserts that they are incomplete in so far as they are referred to some other substance, in unison with which they form a single [hence a composite] self-subsistent thing' (*Replies* 4/99). '[A] man's arm', he adds a bit further on, '[is] a substance really distinct from the rest of his body' (*ibid.*/102), i.e. a substance in its own right.

Prior to addressing the technical notion of incompleteness, it is important to observe that the preceding discussion of and results concerning ideational incompleteness are utterly uninformative on the nature of ideation as a distinctive mode of representation. The words 'a representation whose object is a proper part of an item which is itself an *ideatum* is ideationally incomplete' can be understood fully only by one who knows independently what ideational representation is. Nothing in the formal notion of a mereological relation implies that if one representatum is a proper part of another, then the representations are ideational. Nor is it appreciably more informative to say that a representation is ideationally incomplete if it represents a proper part of a substantial entity, since we have yet to be told what makes the representation of the substance ideational. So a theorist who specifies conditions for ideational incompleteness of the above kind would be mistaken if he himself believes, and misleading if he expects us to believe, that a criterion for separating the ideational gold from the non-ideational slag has thereby been supplied. The significance of this lacuna — which indeed influences all the Cartesian texts appealed to — will not be long in emerging.

7. *Non-ideational ontology: bipolarity and aspectuality*

Descartes countenances one type of incompleteness, and one type alone, in the ideational context. The only type of incompleteness which can figure in the properly scientific or 'certain' conception of things is mereological in character. Expressed in terms of the special

account of mereological incompleteness, this means that only items which are themselves complete — substances which ‘in so far as they are substances, ... have no lack of completeness’ (*Replies* 4/99) — can be incomplete ideata: an incomplete ideatum must be a substantial component of a substantial composite. Expressed in terms of the general account, it means that only items which are proper parts of ideata can be incomplete ideata. The general account is thus more liberal than the special in allowing non-substantial components of substantial items to qualify as candidates for the status of incomplete ideata.

What are non-substantial components of substantial items? Cartesian ontology supplies the clear answer: modes of substance. But if modes are candidate incomplete ideata, doesn’t it follow that they are candidate ideata? Didn’t I state in section 2, however, that Descartes denies the possibility of ideas of modes?

Though there is no inconsistency here, the tension is real enough, and I will eventually argue that it is a focus of severe difficulty for Descartes. As for the appearance of inconsistency, it can be banished as follows. Note that the apparent conflict arises because of the extension of the account of mereological incompleteness from special to general. But the two accounts are not on a par.⁸ Modal ideata are incomplete in a vastly stronger sense than substantial components of substantial composites. Descartes was quoted to say that a subject cannot have an idea of a mode without *ipso facto* ideating the substance of which it is a mode. So, in a clear sense, modal ideata are constitutionally incomplete. This is quite untrue of substantial items which happen to be incomplete ideata. Obviously, Descartes’ dualist argumentation obliges him vigorously to affirm its untruth.

Equipped with the result that ideational incompleteness differs from incompleteness of the kind Descartes ascribes to the world-representations of the sense-perceptual cogniser, we can therefore conclude that the latter, whatever it may be in full, deviates from the

8. The ‘severe difficulty’ alluded to just above can be described preliminarily as follows. While one would expect a special account of something to be subordinated to a general account thereof, it emerges that Descartes’ general account of mereological ideational incompleteness is subordinated to the special account.

mereological pattern. The Cartesian claim that non-ideational representations are constitutionally incomplete thus implies the following: *non-ideational representations do not represent items which relate mereologically to ideata.*

This isn't quite the ontological result we have been striving for; nor is it expressed in the proper form. A representation can fail to represent an item which is related mereologically to an ideatum by failing to represent anything at all. But it is a simple matter suitably to reformulate the implication. *The Cartesian probable cogniser* — he who represents the world non-ideationally or by means of representative instruments which are technically incomplete — *represents the world as comprising items which are not related mereologically to ideata.*

It is simple to reformulate the implication. But it remains to establish that the frankly ontological recasting actually captures a Cartesian thought. For this purpose it is necessary to come up with a type of entity to which Descartes' texts can be shown to generate a commitment and such that any entity of this type fails to bear a mereological relation to an ideatum proper. By doing so, the implication will also be given a proper form, i.e. a form in which the specification of the content of a non-ideational conception of things does not make reference to the content of the scientific or ideational conception.

A term used by one of Descartes' critics can be pressed into service here. Gassendi glosses Descartes' distinction between the completeness or perfection of scientific cognition and the incompleteness or imperfection of mundane cognitive commerce with the world as follows: '*you will be said to possess a perfect idea of a man, if you have surveyed him attentively and frequently and in many aspects; while the idea of him whom you have but seen in passing and on one occasion, and partially only, will certainly be imperfect*' (Objections 5/157). 'Aspect', I suggest, classifies entities of the type we are seeking.

Even apart from Gassendi's testimony, the appropriateness of 'aspect' can be appreciated. If we take seriously the claim that R is influenced by V, it seems clear that the content of R will be aspectual

vis-à-vis o: when the cognising subject stands in a selective relation to his object, no more than an aspect of the latter's character is 'projected' into his consciousness. So the word could have been judged consonant with the spirit of Descartes' critique of the senses even had the texts failed to contain it, since Descartes' dissatisfaction with this mode of cognition comes down precisely to the fact that one who so cognises stands in a distortively selective relation to the object. But though we might have hit upon 'aspect' as the *mot juste* without Gassendi's nudge, it is useful, with an eye on subsequent developments, to take our cue from *Objections* 5. Below we shall see that Gassendi's underlying conception of representation is situated throughout on the 'probable' side of the great divide between probability and certainty. Note how Gassendi's paraphrase relativises the distinction between 'perfect' and 'imperfect'. Speaking of the difference between an idea which is adequate and one which isn't, he says of the former that it '*has these qualities [of truth and conformity with the object] in a greater degree than the other*' (ibid./156). But certainty and probability do not fall on a sliding scale for Descartes. So Gassendi's understanding of the distinction is quite radically unCartesian. The aspectuality of a representation is not in effect counterposed by Gassendi to the non-aspectuality of the object represented. Of course, it is apt to seem that Gassendi crudely begs the question here; for he models the distinction between adequacy and inadequacy — between perfection and imperfection — in the arena of sense-perception. Thus, interpreting Descartes' claim that the wax-experiment supplies a 'clear and distinct' representation of the wax's character, he writes that '*clear and distinct knowledge ... is a survey effected by the senses, of all ... the accidents and mutations which the wax can sustain*' (ibid./148). However, whether he knows it or not Gassendi is in fact making a principled point of great consequence, which effectively shifts the burden of proof to Descartes. In due course, we shall therefore have occasion to return to Gassendi for further guidance concerning the difficulties of Descartes's referral of the probable to the certain.

Though the vagueness of the interpretative proposal will be removed only when the semantics of aspectual representation are

detailed, some oblique steps can be taken here to bear out the proposal's gross accuracy.

Consider first that intuitively appealing protest aired early on against the thesis that Descartes's probable/certain distinction has ontological implications. Arguing that the probable cogniser experiences objects of a distinctive kind — it was objected — is no different from arguing that a subject whose picture of an object is blurred possesses a picture of a blurred object. While the point would be unanswerable were the cases identical, it is possible to see that the protest doesn't pack the same punch for 'aspectual representation' as it does for 'blurred picture'. I agree that the synonymy of the Cartesian phrase 'incomplete representation' with 'aspectual representation' doesn't by itself sustain the ontological formulation of the probable/certain contrast; but it couldn't convincingly be argued that the formulation fails *because* 'aspectual object' is as unpalatable as 'blurred object'. By all accounts, literal blurredness isn't a characteristic of an object portrayed as distinct from the portrayal of it. The same cannot be said — certainly not with the same degree of advance confidence that it will be accepted — about aspectuality. We do speak of the aspects of an object. So the ontological formulation cannot fairly be written off by recycling the protest.

A second step in defense of the ontological proposal consists in showing that it supplies answers of the right kind for two questions which it should answer, assuming its synchronisation with Descartes' thinking. How do aspects (i.e. aspectual objects) fail to be related mereologically to genuine ideata? How is this failure one of principle? Satisfactory answers are implicit in what may appropriately be called *the bipolar relationality* of aspects. Not only is an aspect *of an object*, it is also *for a subject*. In other words, an aspect isn't of an object *tout court*; it is of an object for a subject. For this reason no aspect can be completed into an object of which it is an aspect, whether physically (as a table minus a leg can be completed into a well-constituted table by adding that part), or by some more subtle mental carpentry (as a proper part of a substantial item which isn't itself substantial can be

completed into a substance⁹). It follows that the relation between aspects of objects and objects whose aspects they are isn't of the mereological type Descartes countenances for ideational representation. Items A and B relate mereologically when what 'B minus A' specifies is less than B; when what it specifies doesn't exceed B. Because an aspect is essentially determined by a factor extraneous to the object whose aspect it is, this condition cannot in principle be met.

8. *Confirming the analysis*

Remarks Descartes makes in the course of his critique of the senses partially reinforce the suggestion; and the partiality of the reinforcement they supply, rather than casting doubt on the suggestion's merit, actually sheds light on why Descartes fails explicitly to draw the ontological conclusion.

Consider the assertion that 'colossal statues raised on the summit of ... towers, appeared as quite tiny ... when viewed from the bottom' (Meditation 6/189). (This theme recurs in many forms. Another example from the same text: 'a star makes no larger an impression on my eye than the flame of a little candle' (/193). And the example is used elsewhere in the *corpus*: 'the stars ... never appear to us as large as they really are' (*The Search After Truth*/313).) To describe the statue as 'tiny' is not to describe it as it is in itself; it is to specify a relational feature of the statue — a feature of it qua 'viewed [by a sense-perceiver] from the bottom'. The description of the statue as tiny could be characterised without undue strain as aspectual in nature: it is a description, *inter alia* though essentially, for a subject. In abstraction from the subject's position *vis-à-vis* the statue, the description would resist construal. And note that Descartes' own word here, 'appears', carries implications roughly similar to those borne by 'aspects': how an object appears is determined, *inter alia* though essentially, by factors belonging not only to the object pole

9. This is called 'concretion' by N. Goodman in *The Structure of Appearance*.

(in this case the object's size) but also to subjective factors (here the subject's size and distance from the object).

For a reason to be addressed in a moment, Descartes' claims do not point unequivocally in the ontological direction we are moving. Nevertheless, they do link up with the notion of technical incompleteness. In advancing the quoted claim, Descartes intends to cast doubt on the adequacy of a sense-based conception of reality. (Compare the parenthesised line above from *The Search After Truth* with the general point in the *Principles* that '*the perceptions of the senses do not teach us what is really in things*' (2.3/255).) Clearly, the coherence of a use of the adjective 'tiny' involves bipolarity. Now the term which immediately contrasts with 'bipolar' is 'monopolar'. Just so, it is wholly natural to characterise the kind of incompleteness Descartes countenances in the ideational frame as monopolar. When the incompleteness of an item A is ideational, it is explicable without reference to anything other than a wider item B of which A is a proper part. Since, by contrast, the root intelligibility of the attribution of incompleteness to a determination like 'tiny' is essentially a function of the relation between the object to which the determination applies and the subject who applies it, the incompleteness attributed here is not ideational.

Plainly, the interrelated notions of bipolarity, aspectuality, and non-ideational incompleteness are relevant to analysing the cases described by Descartes. However, their relevance appears to be secured in a manner which does not implicate the ontological proposal, viz. that when 'incomplete' has its technical sense, a Cartesian 'incomplete representation' is the representation of an item of a distinctive kind. To say that the determination 'tiny', qua applied to the statue, is aspectual — it is, for instance, bound up inextricably with a bipolar nexus; in abstraction from this nexus it resists construal — is certainly not to deny that the statue is being described. So the unproblematic aspectuality of the determination implies nothing about the item to which it is applied.

I indicated at the outset that the quoted remarks would not reinforce the ontological proposal quite in the desired way. But I added that the weakness of the reinforcement actually marks a flaw in

Descartes' own presentation, and only tells against the proposal by casting a suspicion on the viability of the Cartesian programme. Without underestimating the complexities of the case, I believe that the 'important observation' of section 6 above provides a key for quickly unlocking the point. I observed that throughout the explication of ideational incompleteness, an understanding of the nature of ideational representation is presupposed.

To extract the significance of the fact in a forward-looking way, let me hark back even farther. A related claim made early in the chapter indicates how the point should be generalised. I said that an unrelenting critic of Descartes' strictures against probable knowledge might express himself by pointing out that whatever Descartes may lead us to believe — whatever he may himself believe for that matter — the o-component of the ' $R = V(o)$ ' schema is understood throughout only within the frame of the schema as a whole.

With this unyielding criticism in view, reconsider the putative shortcoming of the preceding result. It was proposed in an ontological register that the technical incompleteness or aspectuality of a representation implies that the item represented thereby is itself aspectual in nature. But while it can be agreed that 'tiny' figures in Descartes' examples as an aspectual determination, and hence can be granted that saying of a statue that it is tiny is specifying an aspectual determination of it, this (it is claimed) supplies no basis for inferring that the item represented aspectually, viz. the statue, is itself an aspectual object. All that we have here is a contrast between an aspectual determination and an object to which the determination is applied, and from the aspectuality of the former nothing follows about the ontological standing of the latter.

So far as it goes, the point cannot be gainsaid. But it does not go far enough. (And, I am suggesting, neither does Descartes' example, on its most natural construal, go far enough.) The thrust of Descartes' description — unfortunately a lot easier to state than to understand — is not that the aspectuality of 'tiny' implies an aspectuality in the statue, but that the aspectuality of 'tiny' might be matched by that of 'statue' as well.

In advance of impending semantic developments, I can do little

more at the present juncture than offer some hopefully persuasive remarks to incline the reader to take the preceding statement seriously, its admitted obscurity notwithstanding.

In his formulation of the statue-example Descartes appears to be gesturing towards such a generalisation. He objects to the determination 'tiny' because the item described by the adjective is intelligibly so described only 'from below', and hence the term doesn't tell us 'what is really in' the item. But the adjective Descartes substitutes for 'tiny', viz. 'colossal' (Meditation 6/189), ostensibly one which does therefore reveal the item's real nature, *isn't different in logical character*. Given that Descartes himself substitutes one aspectual determination for a second, can't he be seen to be hinting that the terms normally regarded as contrasting strongly on the score of aspectuality may not really contrast so strongly as we tend to think?

It would be a trifle bold to insist on this. Descartes might after all have selected a pure size predicate like '50 feet high' for purposes of contrast without deflecting the central thrust of the passage. Nevertheless, the point is still at least instructive. Even had Descartes made that selection, the obligation would have remained on him to establish that the term chosen for contrast with 'tiny' is strongly different: he could not even then have allowed himself to take this for granted. And exactly the same is true of 'statue'. Consider the fact that though 'tiny' is a relational term, one of whose relata in the case described is the cognising subject, it functions syntactically in a non-relational fashion, in just the way '50 feet high' functions, and no differently than 'statue'. Though its relationality is readily exposed, it is nevertheless implicit. And the same relationality may affect, at a deeper level and hence in a fashion more resistant to speedy disclosure, those terms we would unreflectively tend to see as contrasting here with 'tiny'.

Descartes probably doesn't have all this before his eyes when he formulates the statue-example. But his overall position commits him to the generalisation framed. He of course believes some object-determinations to be non-aspectual. The contrast between 'tiny' and

'statue' can however only be advanced question-beggingly as more than a low-level illustration — a monogram or souvenir — of the literal contrast between aspectuality and non-aspectuality. It is incumbent on Descartes to prove, or at any rate to provide a firm sense to the idea of proving, that any given object-determination is non-aspectual, even therefore 'statue'. The very presence of the wax-experiment, designed to point towards what a non-aspectual (i.e. non-sense-perceptual) grasp of an object is like, should dispel all doubt about this. Had the statue-example itself been deemed to supply a literal exemplification of non-aspectuality, the experiment would have been unnecessary.

The conclusion rested on Descartes' remarks about the statue is more easily stated than understood. That the difficulty of comprehension reflects a difficulty internal to Descartes' thinking and isn't an artifact of over-interpretation is amply confirmed by reiterating that Descartes owes an account of ideational representation. The example of the statue is only a low-level illustration. Should Descartes agree that the distinction between a determination like 'tiny' and one like 'statue' exemplifies the official distinction between non-ideational and ideational representation, a stiff price would have to be exacted. It would follow that the various fallacies commonly charged against his critique of the senses actually are committed. Consider how, with reference to the analogue of the statue-example in *The Search After Truth*, it is Polyander, the commonsense thinker, not the Cartesian, Eudoxus, who states that the 'error' of describing a large object as small can be rectified without changing one's sense-perceptual position: 'all the[se] errors are easily known, and do not prevent my being now perfectly persuaded ... that all that my senses usually offer to me is true' (/313). Eudoxus cannot of course help admitting that non-veridical sense-perception is an occasional thing. But, to repeat a well-worn point, in order to avoid commitment to CP he is obliged to deny that the commonsense or 'positive' distinction aligns with the distinction between Cartesian certainty and Cartesian probability. The oblique tack Eudoxus takes in meeting Polyander's claim is an index of this, and its obliqueness at the same time indicates that the more direct response is being delayed

— a delay become eternal with Descartes' abandonment of the essay in an uncompleted state.

Once again then, we see that there is nothing adventurous in claiming that Descartes must defend the ontological thesis as a condition of establishing Cartesianism. The texts cited reveal a dim recognition of the commitment. It is my aim in the chapters following to show that Descartes' writings contain the materials pertinent to its defense. I might just add here that there are other texts from which Descartes' appreciation of the obligation can be extracted with less effort. In Meditation 6/192-4 for example, where explicitly non-monoplar object determinations like 'agreeable' and 'disagreeable' are mentioned, the moral of the statue-example is considerably extended. However, because I have been working throughout in a forward direction — attempting to make out the nature of probable cognition to be such that an ontological implication arises — it would be imprudent to rely too heavily on the later discussion, since Descartes is formulating his thoughts there on the assumption that the transition to certainty has been effected.

To conclude this portion of the treatment, it will be useful to proceed in the present loosely clarificatory rather than strictly exegetical spirit by enlisting the aid of several philosophers, three classical, one modern, to shed further light on the historical reality and character of the ontological thesis.

9. *Classical and modern evidence*

The epigrammatic description of ideational representation as representation 'from the point of view of substance' was prompted by a remark in Spinoza's *Ethics*. The remark is embedded in a passage having just the implication I wrested with such effort from Descartes' discussion of the statue. But in Spinoza's case the implication is delivered up on a silver platter.

Descartes' words were said to imply that what is true of a determination like 'tiny' might also be true of 'statue', though

obviously at a deeper level of analytic penetration. So the various positive distinctions between the two — ‘tiny’ is an adjective, ‘statue’ a noun; ‘tiny’ a relational term, ‘statue’ non-relational — are no accurate index of their position *vis-à-vis* the line between ideas and non-ideational representations. Spinoza’s claim in the passage alluded to is precisely that our conception of the world as comprising a multiplicity of discrete, finite, substances, e.g. statues, is metaphysically objectionable. A subject who so conceives the world conceives it ‘in the abstract and superficially’; he fails to conceive it ‘from th[e] point of view [of substance]’ (*Ethics* 1 P15N).

Whether Spinoza is right or wrong is immaterial here. The material facts, sufficient to establish the viability of Spinoza’s point in the Cartesian frame, are two. First, Spinoza’s explanation of the inadequacy of the mentioned conception links directly with his account of sense-based cognition. The phrase ‘abstractly and superficially’ functions in Spinoza’s hands much as does ‘unclearly and indistinctly’ in Descartes’. Second, Spinoza’s dissatisfaction with the workaday world-view is expressed, therefore, in the name of an ideational representation of things. From these facts it follows that even if Descartes does regard the representative content of ‘statue’ as ideational, he is bound by a solemn duty to prove this to be the case. Even if my reading of the statue-example is laboured, the conclusion is one that Descartes should have drawn himself.

A formal reason might be thought to exist for declining the suggestion about the aspectuality of ‘statue’, and it might therefore be denied that the suggestion should even conjecturally be attributed to Descartes. ‘Tiny’ is an adjectival determination; as such, when it applies, it applies to the designatum of some further term, e.g. ‘the statue’. Doesn’t it follow that a strong distinction must obtain between the two, strong enough to place them on opposite sides of the ideational/non-ideational line? It doesn’t follow. Descartes says: ‘I distinguish lines from surfaces, and points from lines, as modes from modes’ (Letter to [Mesland] of 2 May 1644/151). And Leibniz generalises the claim: ‘modes can be repeated to infinity, so that there can be qualities of qualities and numbers of numbers’ (*Preface to Nizolius*/126). From the applicability of a determination ‘Ø1’ to the

designatum of another determination 'Ø2', i.e. from the fact that 'Ø1' is ascribable to a Ø2, it cannot be inferred that the latter differs strongly in character from the former. Evidently, Spinoza would say precisely this, 'from the viewpoint of substance', about a singular claim such as 'The table is red': just as the predicate expresses a non-substantial determination, so does the subject. Once again, my suggestion about how Descartes ought to have taken the statue-example is sustained.

In initially specifying 'the official grammar' of 'idea' in section 3 above, I stated that qualifications would have to be made to the categorical claim that only substances can be ideata. These last points volunteer themselves in clarification of the statement. (I beg the reader to bear in mind, though, that the qualifications are necessary to cater for how Descartes actually uses the term 'idea'; I do not admit, in other words, that the qualified account, as opposed to the categorical one, should be regarded as expressing Descartes' considered position.)

The following difficulty arises for Spinoza. On his ontological assessment of a singular claim like 'The table is red', the designatum of the singular phrase is not a substance. Are tables then modes of substance? A moment's reflection reveals that a distinction is needed here between an item which is a monopolar dependency of substance, and one which is a bipolar dependency. The term 'tiny', as in Descartes' statue-example, gets its content both from the object to which it is applied and from the subject who applies it; as such, it expresses a bipolar, not a monopolar, determination. In Spinoza's ontological scheme the classificatory word 'mode' must be restricted to monopolar dependencies: bipolar dependencies (which I have dubbed 'aspectual') have no place. So even if tables are non-substantial items, Spinoza cannot conclude that they are modes unless he also shows that they are non-aspectual in nature. The same applies for Descartes.

Leibniz is the only one of the three rationalist patriarchs to get this explicitly right. (Just so, the ontological proposal that the objects of 'adequate' cognition differ from those of 'inadequate' cognition goes through most smoothly in the Leibnizean context, where

material objects are clearly stated to be objects of a radically different kind than monads.) Speaking of certain features which are central in our putatively basic factual descriptions of the world, Leibniz characterises them as features 'which thought supports but which nature does not know in their bare form' (Letter to De Volder of 20 June 1703/529). While these features are non-substantial, Leibniz doesn't conclude that they are (dependent) features of the world's substantial, monadic, components, since they are in part constituted by thought. Accordingly, because of their bipolar status, they will suffer elimination in the course of the transition to the metaphysically basic description of things, the essential burden of this journey being to sweep away features which are due to subjectivity.

Leibniz's implied distinction is precisely the distinction between monopolar dependencies or monadic features and bipolar dependencies or features which arise in part due to the nature of sense-perceptual cognition. Spinoza is not only committed to the same distinction, but he even makes it, though by contrast with Leibniz he isn't fully aware of what he is doing. Consider the passage quoted above from 1P15N. Having stated that the sham view of items like tables and chairs as ontologically basic is a function of our conceiving the world with the 'help' of the senses and the imagination, rather than by intellectual means alone, Spinoza denies, as therefore he ought, that the world as it really is comprises such items. Later, however, he states: 'We may ... conceive the whole of nature as one individual, whose parts [are] bodies' (2P13L7N). Here, finite bodies, among which tables and chairs are surely paradigms, are accorded positive status 'from the viewpoint of substance'. Plainly, a distinction which Spinoza fails to enunciate is needed. In the passage from Book 1 Spinoza is speaking of bipolar dependencies or aspects; the 'parts' of substance referred to in the Book 2 passage are monopolar dependencies or modes in the proper sense.

It is readily seen that only bipolar dependencies are bound up with the ' $R = V(o)$ ' schema. I have shown that Descartes makes the needed distinction here: the distinction between ideational incompleteness in the general but not special sense, and technical incompleteness. And so, Descartes is willing to allow that there may

be ideas of non-substances, providing these are incomplete in the former sense. But while the distinction is marked in Descartes' writings, it is vital not to underestimate the difficulty of applying it in the concrete. The preceding discussion of the statue-example was designed to demonstrate how severe the difficulty may be. I have no doubt that a major source of Descartes' self-misunderstanding on the transcendent character of the referral of the probable to the certain is his failure properly to address the difficulty.

This brings me to the third classical figure, Kant. It takes little effort to discern that the ontological proposal is taken by Kant for true. Kant classifies the world's constituents as 'appearances', a word, as already noted, which duplicates many of the logical features of 'aspect'. Though I am reserving detailed discussion of Kant for the final chapter, let me set down a few Kantian claims which put a 'QED' to the proposition that his thinking is in tune with the above results — and confirm their historical *bona fides*.

I argued that Descartes' treatment of the statue-example must not in strictness be taken to imply a contrast between the aspectuality of 'tiny' and the non-aspectuality of 'statue': his use of the distinction serves merely as a low-level souvenir of the official contrast. Kant makes the point explicitly.

We commonly distinguish in appearances that which is essentially inherent in their intuition and holds for sense in all human beings, from that which belongs to their intuition accidentally only, and is valid not in relation to sensibility in general but only in relation to a particular standpoint or to a peculiarity of structure in this or that sense. The former kind of knowledge is then declared to represent the object in itself, the latter its appearance only (A45/B62).

Just so, the 'tiny-ness' of the statue is relative to a particular standpoint, while the object's being a statue shows no comparable relativity.

But this distinction is merely empirical [W]e [must not] stop short at this point [W]e ought to treat the empirical intuition as itself mere appearance (ibid.).

Plainly, Kant's point is that the way the distinction between aspectuality and non-aspectuality, or between the bipolarity and the monopolarity of a determination, is marked in workaday thought

and speech (e.g. in Descartes' example naturally construed) is not necessarily a strictly proper marking of it.

For Kant, needless to stress, a proper marking of the distinction is transcendent of our normal ways of thinking and speaking — roughly in the fashion I have been arguing that Descartes' referral of the probable to the certain is transcendent of the former. But 'transcendent' in Kant's texts means 'transcendent *simpliciter*', not merely 'transcendent of how we normally think and talk'. 'The absolutely inward [nature] of matter, as it would have to be conceived by pure understanding, is nothing but a phantom' (A277/B333). Since by 'understanding purely' Kant intends 'ideating', the critical implications for Descartes are clear.

Lastly, it is worth alluding to the position of a contemporary philosopher in order to get a sense of the remoteness of Descartes' thinking from what passes nowadays as ontology. As P.F. Strawson tells the story in *Individuals* and elsewhere, our basic ontological commitments are to middle-sized physical objects. Note how a frankly aspectual term, 'middle-sized', is used to fix the basic ontological type. Evidently, there is ontology and there is ontology, and one has every right to anticipate that attempts to interpret and evaluate the Cartesian position from a broadly Strawsonian standpoint will be premised on a systematic *ignoratio elenchi*.

V The Semantics of Incompleteness

The deep fissure between the ontology of the probable and that of the certain conception of things is explored from a semantic perspective. A semantic thesis to which Descartes is committed, but which he fails to acknowledge and accommodate, is worked out: the instruments of representation of the 'probable' cogniser are 'unclear and indistinct' in a representative as opposed merely to an inherent, fashion. In scholastic jargon: the mentioned instruments are 'formally' unclear and indistinct, not merely 'objectively' so. It follows, as before, that the objects of probable cognition are objects of a distinctive kind. In a surprising turn of events, it emerges that reference and predication, as we know them, are semantic mechanisms of 'unclear and indistinct' cognition, and hence that referents, i.e. satisfiers of predicative contents, are banned from Cartesian science. The root problem for Descartes — viz. the problem of why a probable conception of things must be superseded by a certain conception — boils down to this: why must a conception of the world as comprising referents be replaced by a conception comprising substances?

1. *Why semantic clarification?*

'Representation' is a wider term in Cartesian writings than 'idea'. To qualify as an idea, a representation must be 'clear und distinct'. Descartes grants that the representative states of cognising subjects are not always clear and distinct: the millennium has not yet arrived. Otherwise, the negative portions of the *Meditations* could have been suppressed entirely, and its positive teachings codified in a kind of handbook for convinced Cartesians. The representative content of the sense-perceiver's consciousness differs therefore from that of the cogniser who has achieved Cartesian certainty. The latter's representations alone are ideas in the strict sense. 'Representation', in short, is a generic term denoting a class having for disjoint species ideas and representative states which are not clear and distinct.

Descartes' central concern is to refer the probable to the certain. Should he fail to secure the reference, the imperative addressed to the probable cogniser to seek for certainty could be disobeyed without

compromise to *his* rationality. What, exactly, is the nature of the rationality the possession of which by a subject exacts obeisance to the imperative? Two chapters back, it emerged that the operative notion of rationality is informed by a divine paradigm. In the last chapter, this re-emerged, cleansed of theology, in the claim that Descartes' referral of the probable to the certain is transcendent of the former. The imperative addressed to the probable cogniser must be read, in other words, as an imperative to the effect that he *replace* his non-ideational representations by means of ideas proper. This is the replacement of a picture of the world as containing objects of one type — 'aspectual objects' — by a picture of the world as containing objects of a different type — 'perfect, complete, objects': substances, and items related mereologically to them. Those who require that Descartes provide purely logical argumentation as a condition of successfully referring the probable to the certain are therefore demanding something that he does not supply. The project, again, is one of replacement. But 'purely logical reasoning' is possible only when no more than a nominal gap separates replacer and replaced. The aim of the present chapter is to clarify the character of the replacement in semantic terms.

Why *semantic* clarification? In what way does the (I believe) painstaking examination just concluded leave us in the lurch? Despite our pains we have really accomplished little beyond a partial mastery of the idiom of ideational representation. The results established — that ideata must be perfect objects, that non-ideational representata are related non-mereologically to such objects, that non-ideational representata are aspectual (rather than substantial) in nature — do little more for us than implicitly define the various Cartesian *termini technici* they embed. It is true that by informally construing 'perfect object' as '(Cartesian) substance' we have overpassed the implicitly defining force of these propositions. However, until we know what the *mechanisms* of ideational representation are, that force can alone in strictness be credited. It is easy to enumerate items which are classified by Descartes as substances. But perhaps Descartes' own classificatory decisions are indefensible. So we still must be told exactly why the enumerated objects are classified in this way. The

lacuna in our understanding here obviously leaves its mark on the ontological proposal. And so, because enlightenment is needed in the mechanisms of ideational representation, a broadly semantic project is in order.

The chapter heading signals the roundabout route to be travelled. Our mastery of the ideational idiom remains for the most part on the level of implicit definitions. Plainly, we are much better informed about inadequate, non-ideational cognition — being ourselves in the first instance inadequate cognisers. Sense-perceptual cognition is inadequate; and ‘sense-perception’ is a phrase to which a goodly measure of uncontroversial substantial content attaches for us. The contrast here emerges clearly if we consider the notions of ideational and non-ideational cognition extensionally. While all kinds of doubts assail us over whether the items explicitly classified by Descartes himself as ideata really qualify, it is perfectly clear which conditions of experience are sense-perceptual. In view of this difference, the proper course consists in attempting to determine the exact semantic mechanism of inadequate cognition without appealing to the extra-syntactic contrasts between bipolarity and monopolarity, between aspectuality and non-aspectuality. Some preparatory work along these lines has already been completed. Without essential reliance on either of these contrasts, it was established in the preceding chapter that the adjective ‘incomplete’ Descartes employs when describing an ideational representation differs in meaning from the homonym figuring in the Cartesian claim that non-ideational representations are incomplete. What does the latter attribution of incompleteness come to? That is the question.

The key preliminary index of the difference between the meanings of ‘incomplete’ is that when Descartes applies the term to an idea, he denies that the item represented by the (therefore) incomplete idea is itself incomplete in any non-incidental way. (Addressing the phrase ‘incomplete substance’ Descartes asserts of its denotata that ‘in so far as they are substances, they have no lack of completeness’ (*Replies* 4/99).) Though we remain in the dark as to what it is about ideational representation that guarantees the substantiality of ideata, we do know that ideata must be substantial. So we can be sure that what

Descartes was just quoted to say about ‘incomplete substances’ is a function of the view that ideas by nature are representative instruments capable of representing substances alone.¹

Whatever the incompleteness of an idea comes to, an incomplete idea isn’t then the idea of an incomplete object. But not all representations are ideas. In tandem with the ontological proposal of the preceding chapter, this fact suggests that an incomplete non-ideational representation *is* the representation of an incomplete object. So our question lends itself to the following reformulation: what semantic mechanism is such that the employment in picturing the world of a style of representation to which it is essential guarantees that the objects represented will be incomplete?

2. The anatomy of a self-misunderstanding

It’s a fact of interpretative life: the rightness of a question can often be verified only in light of the rightness of the answer provided for it. This is undeniably a case in point. It would be churlish to pretend that the question posed has clear reverberations in Descartes’ thinking. To commence, I will therefore take some steps to establish the question’s quality by working out a semantic thesis to which Descartes is implicitly committed. The mode of my effort will be diagnostic. Traversing some of the ground covered earlier from a different direction, I shall trace Descartes’ own failure to pose the question to a confusion under which he labours. This should silence critics who might otherwise persist in seeing my innovations as totally anachronistic.

Considerable energy was expended above to show that Descartes’ manifest presentation is pervasively misleading — a consequence of

1. After noting at IV.7 that Descartes appears to allow that some genuine ideata may be non-substantial modes, I claimed that the appearance is misleading. Since I will verify the claim in the coming chapter, I will permit myself to proceed here with the unencumbered thesis that ideata are substantial items; i.e. that the special account of ideational incompleteness is basic, and that the general account is subordinate to it.

the continuous use of epithets like 'obscure' and 'confused', 'vague' and 'inexact', to characterise the representations of the probable cogniser. Each of these terms, *in its pejorative content*, engages the relation between non-ideational representata and ideata proper, and Descartes' compositional practice thereby fosters the impression that the probable is a defective approximation to or variant of the certain. But if ideas and non-ideational representations are different species of (the genus) representation, this has no more legitimacy than the proposition that cats are defective dogs, or tables poor approximations to chairs. While the illicit suggestiveness is built right into Descartes' formulations, it is, however, incidental to his root thinking. I have shown, in an epistemological register, that the pejorative overtones can be filtered from the mentioned terms, leaving behind as a residue the thesis, which can therefore be interpreted and whose implications can be assessed independently, that the content of a probable conception of things (= non-ideational representata) differs from the content of an adequate conception (= ideata proper).

It is easily seen how Descartes could himself have been misled here by operating carelessly — as he admits to operating — with the term 'idea'. Had he employed 'representation' as a generic classifier and restricted 'idea' to representations which are clear and distinct, then the phrase 'unclear and indistinct idea' (or, with the aspersions reduced, 'incomplete idea', where 'incomplete' has its technical sense) would have been effectively proscribed. An idea on this improved taxonomy is 'clear and distinct' (or 'complete') by definition, and the phrase 'unclear and indistinct idea' is brother in logic to 'round square'. One who flits licentiously between a generic use of 'idea' and the preceding restricted use might easily have drawn the excessively strong conclusion that the condition of the subject who represents the world via what are carelessly described as 'incomplete ideas' is internally incoherent, and hence rationally insupportable on compelling logical grounds.

Due to his inconstant handling of the term 'idea', Descartes systematically misexpresses his core position. This is inconstancy, however, not inconsistency. Albeit with difficulty, we have extracted

the distinction between the technical and the non-technical senses of 'incomplete' from *his* texts. So since Descartes' own formulations contain a sharp distinction between what can properly be said of ideas and what can properly be said of non-ideational representations, it isn't in the nature of interpretational legerdemain to maintain that the misexpression can be rectified: a fictive Descartes will not be substituted in the process for the real one; rather, the real Descartes will emerge.

By exploiting the scholastic distinction, with which Descartes works, between the formal and the objective characteristics of a representation, a more forthrightly semantic form can now be eased onto the preceding points. 'When we consider ideas as modes of thought, we are considering their *formal* or *actual* properties; their objective properties are those that belong to them in virtue of their representative nature'.² Roughly, the formal characteristics of a representation are those which it possesses as an entity in its own right; by contrast, a representation's objective characteristics are the ones belonging to it *qua* instrument of representation.

Descartes' main application of the distinction, an application which has occasioned much trenchant criticism, is in connection with the first proof of God's existence. Given the proof's importance for his wider purposes, it is quite unconscionable — and even, in the event, more than a touch incomprehensible — that Descartes fails to say anything informative about what it is in an idea that establishes it as being the idea of such-and-such an object. Apart from stating that we have an idea of God (i.e. that God is 'objectively' in an idea we possess), and then appealing to the causal principle linking formal and objective reality in order to reach his result, Descartes is distressingly silent on the mechanics.

Partly to mark the fact that my interest in the formal/objective distinction is unconnected with the argument about God, thereby preventing the mentioned distress from prejudicing the discussion, and partly because of a desire to proceed in terms less archaic, I shall

2. Kenny, *Descartes: A Study of His Philosophy*, p. 131.

henceforth substitute a pair of words which are often used in place of Descartes' own, viz. 'inherent' and 'representative'.³

The relevant distinction is between those characteristics which a representation possesses qua object in its own right (= its inherent properties or features) and those characteristics which are semantically significant (= its representative properties or features). Clearly, the distinction is not an exclusive one. It seems obvious, for example, that the componential multiplicity of a sentence, an inherent characteristic thereof, is essential to its representing a complex state of affairs. So the mentioned inherent characteristic in this case will also play a representative role. By contrast, that a sentence is written in blue ink will generally be an exclusively inherent feature of it. Gassendi remarks on the overlap: '[the] objective reality [of the idea of me] can only be the representation of or likeness to me which the idea carries', and this is a function of 'that proportion in the disposition of its parts in virtue of which they recall me' (Objections 5/161).

A key point made above was that when 'idea' has its official sense, an idea is by definition clear and distinct. The implication for the distinction between inherent and representative features is plain: *obscurity and indistinctness cannot be representative ideational characteristics*. I will explain in a moment how, to judge from Descartes' own formulations, the truth of the implication is mismanaged. Because its truth is guaranteed by the way 'idea' has been defined, it would obviously be precipitate to read too much into or out of it. In effect, it is a trivial analyticity (or, for precision's sake, the proximate result of one). To assert that obscurity and indistinctness cannot be representative features of ideas is formally analogous to asserting that odd numbers cannot be divided by two without remainder. Just as this last truth doesn't show that there are no even numbers, so its predecessor fails to rule out the possibility of representations whose obscurity and indistinctness are representative characteristics. Also, of course, defining 'idea' as 'clear and distinct representative vehicle' is powerless to ensure that there will be any

3. See Kenny, *Descartes: A Study of His Philosophy*, p. 132.

ideas. By this I do not mean merely that had there been no cognising subjects there would have been no representative states whatever; *a fortiori* no ideas. I mean, rather, that even if cognising subjects exist and are active in representing the world, it remains an open question whether any of their representative states satisfy the *definiens*.

3. Incompleteness is a representative feature

At the close of IV.5 a condition was specified which we would like to meet in the course of interpreting Descartes' technical notion of incompleteness, viz. to explain why Descartes should have been so powerfully inclined to hold the technical incompleteness of a representative state to be an internal flaw in the condition of the probable cogniser as constantly to express himself in a fashion which suggests his critique of that condition to be immanent. Although we are still shy of an interpretation, an explanation, in terms of Descartes' inconstant handling of 'idea', is now in the offing. This precedence of explanation over interpretation is as it should be. Requested is an explanation of a Cartesian *misconception*; because the misconception's existence indicates Descartes' grip on the notion of incompleteness to be less than secure, the explanation should base itself on something less than the full interpretation.

So far as ideational representations proper are concerned — those representations entitling inference to truth as opposed to (mere) probability — obscurity and confusedness cannot, by definition, have representative status. Had Descartes consistently employed 'idea' to cover only the representations of a subject who has achieved certainty, syntax would have generated the conclusion that 'obscure idea' and kindred phrases are ill-formed. This would have forced the recognition that any representation so characterised cannot be an idea in the strict sense out into the open. But Descartes smudges the line between 'idea' in its official sense and in the generic sense attaching to it naturally due to the inertia of common parlance. Because Descartes holds that there are subjects — most of us most of the time: 'most men in life perceive nothing but in a confused way' (*Principles*

1.73/251) — whose beliefs are not certain, i.e. whose representative states are confused and obscure, he is therefore led to treat the mentioned features as non-representative features of ideas proper. He is led to this because (a) it follows from how 'idea' functions officially that no idea can be representatively confused, while (b) the failure to treat 'obscure idea' as a specific classifier whose members are disjoint from the members of the set of ideas proper obliges him to provide some ideational status for the confusedness in question. In the event, the only option here is the non-representative or inherent one.

This diagnosis has the great merit of explaining why Descartes continually misformulates the reference of the probable to the certain. More direct confirmation of its accuracy accrues by recurring to the example of the blurred picture. In many respects, Descartes handles 'obscure' and 'confused' just as the terms would be handled by one who is guided by such a picture, and it is difficult to believe that this is an accident. All would agree that blurredness cannot attach to an object pictured, its only possible status being as a feature of the picture described as blurred. In terms of the inherent/representative distinction: the blurredness of a blurred picture (like, to vary the example, the garbledness of a garbled message) would naturally be marked down as an inherent pictorial characteristic lacking representative status. Since this decision is ensured by the advance agreement that no pictured object could itself be blurred, one who transposes the blurredness from the picture to the object would commit a pitiable mistake. Along what certainly seems to be a parallel line of reasoning, Descartes treats obscurity and confusedness as non-representative ideational characteristics. Paralleling the preceding agreement that no object can be blurred, it is a Cartesian definitional truth (and hence Descartes can expect informed auditors to concur) that ideata cannot be confused or obscure.

Needless to repeat, the reasoning here is badly flawed. 'Blurred picture' is an inaccurate analogue of 'obscure idea'. Descartes' misformulations notwithstanding, he is aware of the inaccuracy at a deeper level. Agreement is readily secured that blurredness cannot be a representative pictorial characteristic. Were the parallel regarded by

him as accurate, Descartes would have thought himself justified automatically in assuming that the probable cogniser would admit that he is misrepresenting the world. The rigours of Descartes' actual argumentation suffice therefore by themselves to show that he doesn't finally reason along the mentioned lines.

While misleading, Descartes' presentation is therefore misleading with respect to his own considered views. The preceding diagnosis explains how he could have gone awry here. Once the distinction is enforced between the official sense of 'idea' and the sense attaching to it as a generic term, the textual difficulties vanish. The meaning-theoretic result of removing the difficulties can be exhibited in a single sentence, which can be reached by examining a faulty piece of syllogistic reasoning.

A theorist could argue soundly from 'No idea is representatively incomplete' via 'The ideas of the probable cogniser are incomplete' to 'The ideas of the probable cogniser are inherently incomplete' only if 'idea' appears univocally in the premises. But in the first premise 'idea' has its official meaning. (If 'idea' is construed generically in the premise, there is no reason to regard the assertion as true.) In the second premise 'idea' means 'non-ideational representation'. (If 'idea' is construed officially here, then the premise's subject phrase does not apply to anything.) And so, from the (dictionary) fact that no idea in the official sense could be representatively incomplete, nothing at all follows about the status of incompleteness *vis-à-vis* the inherent/representative distinction where non-ideational representations are in question.

In a single sentence, this then is the meaning-theoretic thesis to which Descartes is committed, and which is obscured in the texts by his systematic failure to employ 'idea' univocally: *incompleteness is a representative feature of non-ideational representations*. The failure propels Descartes from 'Obscurity is not a representative feature of an idea' to 'Obscurity is an inherent feature of an idea'. But the movement to which he is really committed is, rather, from 'Obscurity is not a representative feature of genuine ideas' via 'The representations of the non-scientist are obscure' to 'Obscurity is a

representative feature of the non-ideational representations of the non-scientific cogniser'.

On one occasion, we find Descartes actually making the mistaken move; though, as I have stated often enough, his immanent formulations of the referral of the probable to the certain exemplify the same error. To Gassendi's objection that '*my thought is not the rule of the truth of things*' (Letter to Clerselier concerning *Objections* 5/128), Descartes responds indignantly: 'it is the most absurd and extravagant error that a philosopher can commit, to wish to make judgements which have no relation to his perception of things' (ibid./129). However, Gassendi is surely innocent of the lunacy of maintaining that the determination of the nature of things can be accomplished without consulting one's perceptions. His claim is that the representative contents of one's workaday consciousness are inadequate to the state of things as pictured in Cartesian science. The only conceivable explanation of Descartes' hostile reaction — so apoplectic as to bespeak incomprehension — is that he is reading 'perception' as 'perception which isn't representatively confused', something he could have done only if he were dominated by the thought that confusion cannot be a representative feature of perception.

In addition to the ontological formulation of the character of Descartes' referral of the probable to the certain, we now have in hand a crude semantic description of that type of representation which figures in probable cognition. Ontologically: the probable conception of the world comprises objects which are not Cartesian substances, nor which bear a mereological relation to the latter. Semantically: the character of the probable mode of cognition is such that the objects represented thereby are, in the technical sense, incomplete: incompleteness is a representative characteristic of probable representations. The task before us is to link up these complementary formulations in a satisfactory way. What is representative incompleteness? What is the distinctive semantic mechanism (or mechanisms) of non-ideational representation? How does a subject's use of this mechanism (or mechanisms) ensure that his representata won't be Cartesian ideata?

4. *Berkeleian reflections*

Tackling the link will lead us onto analytic terrain, with an attendant distancing from the historical straight and narrow. To render the transition less abrupt than it might otherwise be, it is worth pausing for the space of a section to enlist some collateral historical support for the result just reached. Berkeley, whose position has in recent years increasingly been recognised as Cartesian in lineage and spirit, makes the crucial point that non-ideational representation is of a distinctive type, and makes it in a more direct fashion than Descartes. To be sure, the baldly-stated thesis that 'Berkeley...is an Irish Cartesian'⁴ cries for independent verification; the reader sceptical as to its truth would therefore have to be excused for viewing the parallel I see here with a cold eye. But since the preceding argumentation has been completed independently of any appeal to Berkeley, I can permit myself to assume a root community of doctrine, and leave the proof of the pudding very much to the eating.

Genuinely ideational incompleteness is mereological in character for Descartes. An identical thesis is expressed by Berkeley. 'I have a faculty of...representing...the ideas of those particular things I have perceived, and of variously compounding and dividing them. I can imagine a man with two heads; or the upper parts of a man joined to the body of a horse.... [But] it is...impossible for me to form the abstract idea of motion distinct from the body moving' (*Principles* Introduction. 10). If we construe 'incomplete idea' in the sense in which Berkeley isn't averse to the phrase, it emerges that he, just like Descartes, takes this attitude on condition that the idea so described represents a separable part of a wider whole — hence a part which can exist on its own, like the bodiless head of a man or a headless equine trunk.

The quotation indicates that where ideational representation is concerned Berkeley violently opposes abstractions. That his opposition echoes Cartesian strictures against 'incomplete ideas' is attested by the way Descartes explains the inadequacy (i.e. the

4. H.M. Bracken, *Berkeley* (London: Macmillan, 1974), p. 159.

incompleteness) of a cognition by appealing to 'intellectual abstraction'. Even without arguing that the correspondence is exact, the point of immediate interest can still be made with undiminished force.

Why does Descartes reject incomplete ideas? He does so, as I explained, because he denies that there can be incomplete ideata. Even though Descartes' reasoning here is impeccable, he hasn't made any move which forecloses on the possibility of incomplete representations which are not ideas. The suggested parallel between Berkeley and Descartes will thus be confirmed if the Irishman can be shown to grant that despite the cognising subject's inability to operate with abstract ideas (there being none) he can nevertheless cognise abstractly. Grant it he does: 'it must be acknowledged that a man may *consider* a figure merely as triangular; without attending to the particular qualities of the angles, or relations of the sides. *So far he may abstract*' (*Principles* Introduction. 16). Berkeley doesn't see the acknowledgement as endangering the all-important denial of abstract ideas, and in this he is perfectly correct since an idea is by definition a representation which discharges all abstractness. But Berkeley is nevertheless admitting a style of cognition, a mode of conceiving objects, which falls short of — or, better, which differs from — ideation in the strict sense.

For several reasons, Berkeley's formulation has a greater clarity than Descartes'. When describing the mode of cognition titled 'considering an object', Berkeley avoids using the term 'idea'. So there is no verbal pressure on him to deny that those features which show considering an object, qua mode of cognition, to be distinct from ideating an object in the strict sense are inherent as opposed to representative features of the instruments of considering. Descartes, I argued, should have formulated his views of inadequate cognition in precisely this way. Rather than putting 'A subject has an obscure idea of an object', he would have been much better advised to write 'A subject represents an object in a non-ideational fashion'. It is also clearer from the Berkeleian context why the frank admission of a non-ideational mode of cognition is not regarded as a source of insuperable difficulty (though I would maintain that the difficulty is

as real for Berkeley, and as intractable, as for Descartes). Berkeley specifies the object considered, i.e. cognised in non-ideational fashion, *independently* of this inadequate mode of cognition. Similarly, Descartes consistently writes as if the self-same item of which a Cartesian scientist has an idea is conceived unclearly and indistinctly by the probable cogniser. The inaccuracy of this immanent style of referring the probable to the certain can be restated in Berkeley's case by envisaging a critic who reacts as follows to the quoted acknowledgement: 'I do not contest your claim that there can be no abstract ideas. How could I? Its truth is definitionally guaranteed by how you choose to understand "idea". What I do deny is that my cognitive grasp of the world is ideational in the first place. The manner in which I cognise objects is in the mode you call "considering". So quite compatibly with what I do not contest, I maintain that your critique of the abstract does not bear in the slightest on my (abstract) cognition of the world'. The same point reapplies, *mutatis mutandis*, in the Cartesian frame. Where 'incomplete' has its technical sense, there can be no incomplete ideas, providing 'idea' is functioning officially. But non-ideational representation can involve this kind of incompleteness, and involve it constitutionally, as a defining feature.

5. *The semantics of non-ideational representation*

Returning to the task of linking the ontological and semantic formulations of incompleteness, I shall proceed by advancing a range of cases in which items which are uncontroversially non-substantial for Descartes (and hence which aren't possible ideata) are represented as complete. By identifying the semantic mechanism or mechanisms instrumental in accomplishing this, a provisional identification will be made of what it is from a semantic perspective that marks a style of representation as non-ideational. The form of the reasoning here is quite simple: if an item which counts as incomplete on Descartes' official view can be represented as complete, then the mechanism or mechanisms effective in so representing it cannot be operative in

ideation proper.⁵ The textual justification for reasoning in this way is solid. Because the sense in which an ideational representation is complete is exclusive to the ideational domain, it follows that when 'complete' applies to a non-ideational representation its sense must differ.

An appropriate place to resume is with the Cartesian remark that no cogniser can have a perception of a substantial mode or quality without *ipso facto* perceiving it to be the mode or quality of such-and-such a substance. Upon first encountering the remark we wondered why Descartes should conceivably have thought it even plausible, let alone true. We now know not only that he does think it true, but also that what underlies his thinking is impeccable. By 'perceiving' in this connection Descartes means 'ideating'. Since ideation is by definition a style of cognition which discharges the flaws variously described as 'imperfection', 'incompleteness', 'fragmentariness', 'partiality', and so forth, the *prima facie* implausible claim follows straightaway. Given that a mode or quality of a substance is incomplete, one who ideates it *ipso facto* perceives (= ideates) the substance it qualifies or whose mode it is.

The reasoning here, though formally without blemish, evidently suffers from a certain insubstantiality. Since the result flows immediately from the way 'ideation' has been defined, the question about Descartes' position can easily be raised in a new form. 'Granted that the subject's ideating a quality or mode independently of the substance modified or qualified is definitionally ruled out, why may the subject not otherwise conceive (= non-ideationally represent) the mode or quality apart from the substance? What prevents a subject from speaking of a shape or colour he sees (both being incomplete for Descartes) while ignoring the object whose shape it is or which is so coloured? Doesn't he do precisely this when he assertively utters 'The shape is rectilinear' or 'This red (colour) is bright'?'⁶

5. I repeat that this formulation ignores Descartes' general notion of ideational incompleteness. See the footnote to the penultimate paragraph of V.1.

6. The subject phrases here are to be taken as particular-specifying expressions. One who utters the latter sentence assertively isn't making a claim about the colour, redness, which can also qualify other objects. Consider the two claims 'A is shod' and

The two theses attributed to Descartes, whose implicitly defining force with respect to the terms they embed we are trying to eke out, are these. (1) No item which isn't a substance can be ideated. (2) Items which are not substantial can (only) be represented non-ideationally. Reconsider now the quoted sentences which were just said to be such that a subject, by using them factually, can pick out an item which isn't a Cartesian substance. The mechanism of item-specification in these sentences is (singular) reference. If the items mentioned in (2) are amenable to referential specification, may it not be inferred that reference is the semantic mechanism of non-ideational representation?⁷

This, formulated bluntly, is precisely the thesis I am promulgating in explication of Descartes' position on non-ideational representation: from a semantic viewpoint, the probable cogniser's relation to the world is referential in character. The opaque meaning-theoretic principle attributed to Descartes on internal textual grounds was that incompleteness is a representative feature of non-ideational representation. So referential specification is being identified with representational incompleteness. The corresponding, and correspondingly opaque, ontological thesis to which I claimed a Cartesian commitment was that a probable conception of reality comprises items which are constitutionally incomplete. This last, when conjoined with the meaning-theoretic thesis in its clarified form, yields the result that referents, i.e. items specified by the mechanism of (singular) reference, are of the natively incomplete kind.

'B is shod'. While 'the same thing' is said both of A and of B, viz. that they are shod, A's shoes are quite likely different from B's. The relation between 'A is red' and 'This red ist bright' may be taken as parallel to that between 'A is shod' and 'These shoes are brown'. More on this below.

7. I say '*the* semantic mechanism'. Since reference doesn't operate in a semantic vacuum, the inference, more exactly, is that reference, and whatever semantic mechanisms are integrally bound up with it, are exclusively non-ideational.

6. *Reference: a transcendental semantic mechanism?*

I have moved rather quickly here, resting a weighty semantic thesis on a basis of examples which is not only narrow, but whose constituents are themselves problematic. Preparatory to patching up these expository flaws, let me show that the thesis at least meets the conditions of adequacy set down in the preceding chapter, and then go on to dispose of a few general objections which are not opportunistically actuated by what is admittedly a flimsy basis.

Two fundamental conditions of adequacy were specified. In order to pass muster, an interpretation of the technical Cartesian notion of incompleteness was required to do justice to the fact that saying of a representation that it is incomplete in the technical sense is saying something about the representation: 'incomplete' must not be so interpreted that its applicability to a representation is wholly derivative on its prior applicability to the item represented. The condition is satisfied: saying of a representation that it is referential is saying something about it qua representation. Also, a candidate interpretation was required to capture the fact that the incompleteness of an item represented follows from the incompleteness of the representation. This condition is met too: from the referentiality of a representation it follows that the item represented is a referent.

Plainly, these conditions of adequacy are necessary conditions. It remains to establish, in a positive way, that referents are banned from the ontological assay of Cartesian science. Fully to substantiate this odd-sounding thesis, we shall have to make further inroads into the mechanism of ideation, a task I defer for the chapter to come. What are the objections that might be raised against the thesis in its present state?

The following objection can be anticipated. Even if referential mechanisms may be used to specify items which are not Cartesian ideata, does that by itself justify the appropriation of reference exclusively for inadequate cognition? Can't the self-same mechanisms of mind-world connection operate ideationally as well? Why — to dress the point in traditional garb — may reference not have the status

of a *transcendental* semantic mechanism, at home on both sides of the idea/non-idea line?

I agree that the thesis that reference is semantically parochial to the non-ideational arena requires more defense. But the requirement shouldn't be exaggerated. The objector would be going too far if he means to suggest that the thesis is mistaken because each and every semantic mechanism might be transcendental. The power of such an appropriation to surprise (as distinct from the power of this particular appropriation to surprise) varies inversely with the objector's sensitivity to the width of the rift between the probable and the certain in Cartesianism. Advanced in unrestricted form rather than against this particular appropriation, the objection has the ring of the patently unacceptable claim that though sense-perception is integral to our normal, uncertain, conception of things, that does not preclude its being a 'transcendental mode of cognition', i.e. a mode also operative in the scientific, or certain, realm. In short, we should expect there to be a corresponding semantic distinction at least as strong as the cognition-theoretic distinction between a sense-based mode of contact with reality and a mode which doesn't have the structure of sense-based contact. Agreed, our expectations may go unfulfilled. But I conceded that additional defense is needed, and it is enough for now that the burden of proof is shifted towards the shoulders of the objector.

Assuming that this is understood, here is a pair of more discriminating reasons for pressing the objection.

As we understand reference and truth, they go together. If referential mechanisms are exclusive to the non-ideational sphere, may it not be inferred that truth is alien here as well? The quick answer is that Descartes himself denies that the same terms of truth-evaluation apply across the probable/certain divide. Subject to the firm establishment that our domestic notion of truth is not Descartes' — which seems to follow directly from the fact that we apply 'true' and 'false' to propositions whose evidential basis is sense-perceptual — this is less a ground for objecting than the identification of an internal and problematic feature of the Cartesian system.

A second reason for protest gets a similar response. Given that

reference is central to linguistic representation, doesn't it follow that Cartesian ideational representation is fundamentally non-linguistic? It does follow. Because of a widespread contemporary belief in a positive Cartesian link between language and mind, I shall devote a separate chapter to the matter. As an earnest of what is to come, it is worth noticing again Descartes' concurrence with Hobbes that the argumentation for dualism would be endangered if it made essential use of 'names': *'names [depend] on the imagination, and imagination, perchance, as I think, on the motion of the corporeal organs'* (*Objections* 3/65). 'Names', it seems, belong to a style of representation which is inadequate.

The thesis that referents constitute an ontological type is, I conceded, odd-sounding. But its oddity, as these last points illustrate, diminishes the clearer we become on how very distant the objects of adequate cognition are from our everyday ken.

7. Two objections: an extreme objection rejected

The semantic mechanism known as 'reference', and whatever other semantic mechanisms are essentially bound up with it, belong exclusively to non-ideational representation. Referents, it therefore follows, are not Cartesian ideata. Such is the thesis advanced to explicate Descartes' conception of non-ideational representation.

The thesis's attribution was rested on the fact that a speaker, in assertively uttering a sentence like 'This red is bright', makes reference to an item which is not a Cartesian ideatum. The thesis would obviously be worthless if it did not extend to central cases of reference, e.g. the case in which a speaker makes reference to an item by uttering the unproblematic referential sentence 'This table is red'. However, it is tactically necessary to start with an example in which a recognised non-substance is referred to. Tables might after all be deemed to qualify as (material) substances for Descartes. So the defense of the thesis must work outwards from clear cases; must involve showing that what was just now called 'an unproblematic referential sentence' does not differ in its basic character and

implications from the problematic one. In the remainder of the chapter I shall be considering a critical line of reaction to the thesis. Vitally, the reaction proceeds on the 'positive' level; it is a reaction of 'analytic' stripe. An attempt will be made to show that the analyst systematically overestimates the relevance of the kind of linguistic and conceptual material he operates with to a position like Descartes'.

Without denying that a sentence like 'This red is bright' can be put to factual use, a critic of my explicative thesis might contend, not implausibly, that the use counts as coherent only if the subject who utters it recognises that the item he specifies referentially is not an independency. While the subject is independently specifying the colour quality, he is not specifying it — the critic claims — as an independency. A subject who speaks referringly of the red colour he sees will, if his speech is coherent, also be aware that what he specifies qualifies some (perhaps as yet unidentified) physical particular, e.g. a mail-box.

The *prima facie* anti-thetic force or the contention — its *prima facie* force against my thesis — is easily discerned. The thesis was that the possibility of using the sentence 'This red is bright' to make a factual claim whereby a dependency is referentially specified contrasts strongly with the impossibility of ideating a dependency; and from the contrast the conclusion was drawn that ideational specification isn't referential. But if it is presupposed that the subject who by uttering the sentence refers to the colour recognises it as a dependency — recognises, to put the point linguistically, the derivative status of the referring expression 'this red' — the contrast vanishes.

The anti-thetic contention can be construed in either an extreme or a moderate fashion. Accurately to gauge its force, the two construals must be distinguished. Proponents of the divergent construals differ on how to take the characterisation of the referring expression in 'This red is bright' as derivative.

A sponsor of the extreme construal maintains that the (grammatically identified) referring expression in the sentence isn't really a referring expression: it only appears to be one. On the moderate construal, the referring expression is regarded as derivate

not because it is an imposter, but rather because its descriptive kernel, by contrast with the descriptive kernel of a non-derivative referring expression, derives from a general term whose (more) basic mode of functioning is predicative.

To help elucidate the difference, let us distinguish two paraphrastic glosses of the sentence. A proponent of the extreme view glosses the sentence as 'This [...] which is red is bright' or 'This [...] is bright red'. (The blank is a place-holder for a term like 'mail-box'. I leave it open to keep alive a sense of the fact that the utterer of the expanded sentence may not be in a position to identify the object to which the colour attaches.) As this shows, he denies that reference is made by the utterer of the sentence to a dependency. The claim's referentiality isn't a function of the phrase 'this red', but of another phrase, which alone is regarded as a well-constituted referential unit. A proponent of the moderate construal expands differently: 'This red [of the...] is bright'. By inserting the bracketed portion he nods in the direction of the derivational history of 'red'. But the insertion isn't required by him in order to expose 'this red' as a referential imposter. So it survives intact in the expansion despite the addition.

Aided by a distinction made a few paragraphs back, we can now state the precise difference between the two construals of the response. A proponent of the first expansion claims that only independencies can be independently specified. A proponent of the second, while allowing that dependencies can be specified independently, holds that the overall coherence of such specifications presupposes that the dependencies be recognised by the specifier for what they are.

There can be no doubt that the response, construed in the first way, is too strong. Recognised dependencies can certainly be specified referentially. Consider the intuitively plausible view that a form like 'A beat B mercilessly' is more perspicuous than 'The beating A administered to B was merciless'. True enough, the descriptive kernel of the gerundive nominal 'the beating' is transformationally derived from the verbal form 'beat'. But this says nothing whatever against the fact that the phrase is (and hence can function as) a singular

referring expression. A speaker might accentuate the referentiality by asserting: '*That* beating was merciless'.

Another kind of reason counts decisively, and also quite instructively, against the strong construal. Were it correct, the only genuine references we ever would make would be to items which have a place in Cartesian ontology. The position of the sponsor of this construal is therefore the mirror image of my own. He is appropriating reference for ideational representation. But while his claim has what I believe to be the proper form — for a specific semantic mechanism is identified as parochial to ideational cognition, and is thus denied transcendental status — the appropriation is quite unconvincing.⁸

The moderate construal of the response is therefore the one that must be assessed for anti-thetic force. To this end, let me formulate it in a more articulate way.

8. *Meeting the moderate objection*

The moderate respondent grants that reference is possible to items which aren't Cartesian substances. But he adds that the coherence of this kind of singular specification presupposes that the referrer recognise the dependent status of the items specified. So while Descartes' denial that dependencies can be ideated seems to contrast with the claim that dependencies can be referentially specified, the contrast's sharpness dulls decisively once reference is considered in conjunction with individuation. Take the sentence 'The beating was merciless'. One who utters the sentence makes reference to a

8. There is an enlightening parallel here with the case of 'names' in Wittgenstein's *Tractatus Logico-Philosophicus*. According to Wittgenstein, names name only 'simple objects'. Given that no such objects are the nominata of our everyday names, are we to conclude that the terms we normally classify as names aren't names at all, or only that they are not Tractarian names? Typically, the first option is selected. But the second is also a legitimate alternative. If it is chosen, then the Tractarian *analysans* of an everyday singular sentence is transcendent with respect to the latter's content. See my '*Tractatus: Pluralism or Monism?*', *Mind*, LXXXIX (1980).

dependency. But because the individuation of the referent of the singular phrase rests on (prior) individuation of the items (the agent and victim of the assault) on which the referent depends, it follows that the dual function, reference + individuation, links up primarily with independencies. And so — the moderate respondent maintains — providing reference isn't considered in a vacuum, the Cartesian thesis about the inability of dependencies to be ideated is echoed in normal, referential, patterns of world-description.

As indicated, the moderate respondent is an analyst, in the dominant contemporary sense. It is vital to appreciate how he is constrained by his practices. Qua analyst, he is debarred from maintaining that effective appeal can be made to the individuating function, as something which disciplines reference, from *outside* the confines of standard discourse patterns. Should he say that 'the red' specifies a dependency, this won't be because, by some kind of linguistically unmediated inspection of the world, he recognises colours to be existentially dependent qualities of objects which are not themselves colours. Were he to arrogate this kind of ontological insight to himself he would invalidate his analytic credentials and confound his own defensive purpose into the bargain. For if the identification of basic or existentially independent referents is accomplished by direct inspection rather than by examining the facts of referential discourse, then what is the point of claiming that these facts connect up positively with Descartes' thinking on ideational cognition? In short, the respondent's appeal to the individuating function, over and above the referential function, is essentially an appeal to the former as it bears on and is manifested in referential discourse. The respondent is after a distinction *among* referring expressions: nominally, the distinction between referring expressions for independent individuables and referring expressions for dependent individuables.

Viewed linguistically the distinction between referents which are and those which aren't individually basic is grounded in a distinction between general terms whose primary mode of function is predicative and general terms which operate naturally in a singular frame. In 'The mail-box is red', the general term 'red' functions predicatively. (I will extend the word 'predicative' to include ascriptive

appearances of general terms as well, as in 'The red mail-box is tubular'.) In 'This red is bright', 'red' appears in a singular frame. The theorist we are engaging, who grants the legitimacy of the latter form but denies that reference can *ipso facto* be identified as a non-ideational semantic mechanism, argues that the individuation of the referent of 'this red' can be accomplished in a well-defined way only by (prior, and in this case implicit) individuation of the item (in this case, the mail-box) which has the quality. To put it linguistically, he argues that when 'red' functions in a singular frame, it has undergone *nominalisation*, and is therefore a derivative form. In sum, a general term which, when functioning singularly, has undergone nominalisation, refers as so functioning to a dependency whose individuation is routed through the individuation of another item (or other items) to which the general term, in its non-nominalised form, can (truly) be attached predicatively.

The essential distinction here — and let there be no mistake about its being an 'analytic' distinction — contraposes general terms which function referentially without undergoing nominalisation to general terms which are transformed nominally in the course of insertion into the singular frame. It is claimed that terms of the latter kind are fundamentally predicative in character, and hence claimed that when functioning singularly they specify (dependent) features of other items, viz. the referents of singularly operating general terms which, in that mode of operating, have not been subjected to nominal transformation. So while one can employ 'red' singularly, the fact that as a condition of functioning singularly it is transformed suffices to reconstitute Descartes' claim that only independent items can be ideated. There is therefore no compulsion to accept the argument from the agreed premise that 'red' is capable of appearing as part of a referring expression to the non-ideational status of reference as a mechanism of item-specification. Since the referring expression 'this red' contrasts in the ways described with a referring expression such as 'this mail-box', there is available a distinction among referring expressions quite clear enough for purposes of explaining Descartes' position.

Exhaustive criticism of this response will be deferred until the

coming chapter. But while I content myself here with blocking its putatively anti-thetic force, a couple of points relevant to the full scale treatment may be noted.

Some general terms alter form as between predicative and singular appearance. E.g. the term 'beat' grows and 'ing' when slotted in the singular frame. Other such terms, e.g. 'red', remain constant in form as between post-copulative and post-articular appearance. The schematic general term ' \emptyset ' is to be taken as plastic in this regard.

Though the response to be criticised has been formulated linguistically, it mustn't be understood in too crudely a 'positive' fashion as susceptible to confirmation or refutation by citing the workaday facts of natural languages. In English, there are general terms which operate naturally in the singular frame and which lack an equally natural predicative mode of operation, although they would intuitively be classified with 'red' as expressing dependent features. We speak for instance of an object's impetus. But while it is felt that the singular specification 'the impetus' is akin to 'the red', there is no available cognate of 'impetus' which functions naturally, as 'red' does, in predicative place. The response up for examination isn't to be seen as coming to grief on this kind of fact. I am willing to permit the theorist to look for a better behaved general term which can be used singularly as 'impetus' is used, and which does have a natural predicative form, e.g. 'speed', or even to create a suitable cognate form. So the response is to be understood in a slightly idealised manner. I shall not therefore raise any objection to the distinction the respondent draws between two kinds of general terms. As indicated in section 7, the argument will be that he overestimates the distinction's relevance to the Cartesian position.

9. Leibnizean light: substance and accident

Since the Cartesian texts are thin on relevant linguistic material, it will likely be questioned whether the whole discussion is properly anchored in Descartes' thinking. Fortunately, a Leibnizean claim can be found which seems to reduplicate the moderate response. Seeing

how Leibniz's view here deviates from what the respondent has in mind will enable us to see why the moderate response fails.

Leibniz states: 'Every accident is a kind of abstraction; only substance is concrete' (Letter to Des Bosses of 20 September 1712/605). Therefore, according to Leibniz, singular designators designate abstractions when 'they... are... abstracted from the predicates of substances' (ibid./ibid.). Because a singular designator like 'the red' is built on a general term whose primary mode of functioning is predicative — a term which, in that function, expresses an 'accident of substances' — the singular designator can be classed as abstract.

This echoes the position I am attempting to meet. My analytic opponent notes that as a condition of its singular appearance 'red' has undergone nominalisation. The term is 'derived from a predicate'. But while he agrees that the colour can be specified referentially, he adds that the origin of the singular form attests to the status of the referent as a dependency. Now Leibniz ekes out *his* characterisation of a singular designator as abstract with an explanation: 'only substance is concrete'. The point he makes is therefore compendious. Singularly functioning general terms whose basic mode of operation is predicative are functioning to designate abstract items: non-independencies; and their basic mode of functioning is predicative because they express features of (concrete) substances.

While the two theses roughly echo each other, a potentially significant dissonance can be heard. The analyst maintains that a singular term designates a dependency when its descriptive kernel has undergone nominalisation. But the analyst doesn't set out equipped in advance with a distinction *in rebus* between concrete and abstract designata; to mark concrete designata off from non-concrete he appeals to the distinction between general terms which operate naturally in a singular frame and those which don't. To judge from Leibniz's words (not to mention his metaphysics), *he* does however begin with an independent grasp of the distinction between substances and substantial accidents. I shall exploit this difference in a marginally speculative way to impugn the anti-thetic force of the analyst's claim. The notion of nominalisation, and hence the distinc-

tion between nominalised general terms and general terms which aren't nominally transformed as a condition of appearing singularly, is, I shall argue, too weak for Descartes' purposes.

Its weakness might well have been suspected on other grounds. The analytic argument from individuation + reference retraces Strawson's argument for the 'ontological priority' of material particulars — the designata of singular terms like 'the table' and 'the mail-box'. But what does Strawsonian ontology have to do with Cartesian science? So, again, in the absence of some independent line on what Descartes understands by ideation, it must be questioned whether the analyst's point bears at all on Descartes' thinking. It does I think have a bearing; but specifically on the negative portions thereof, not on the positive views of certain cognition.

The Leibnizean claims quoted above were extracted from a fuller passage containing these lines.

Accidents can... have concrete predicates, as when an impetus is called great, but they themselves are not concrete but abstracted from the predicates of substances (*ibid./ibid.*).

The seeds are found here of an illuminating response to the analyst. The important additional claim, previously omitted, is that 'accidents can have concrete predicates'. By following the hint, we will be able to show that the analyst's distinction between nominalised and non-nominalised forms cannot accomplish the required historical work.

Let me repeat the analyst's chief point. On his view, a general term which undergoes nominalisation as a condition of operating singularly is a general term which expresses a dependency of some further item. In the fuller passage now before us, Leibniz puts his finger on a reason for nominalisation which the analyst does not budget for, and which, in the event, undermines the distinction he emphasises.

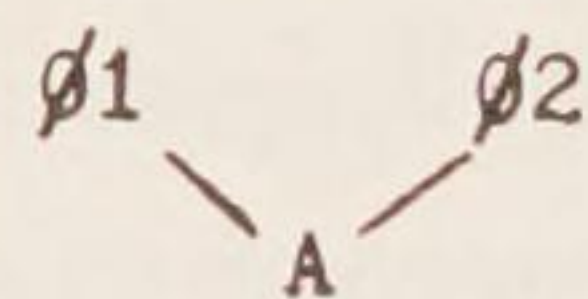
10. *Nominality-induction and normal nominality*

The descriptive kernel of each of the singular terms in the following sentences would not be said by the analyst to have undergone nominalisation as a condition of being so used: 'The water is extremely hot'; 'The tie is bright red'; 'The ball moves uniformly'. Now consider these variant forms, which roughly match the respective originals in informative content: 'The heat of the water is great'; 'The red of the tie is bright'; 'The motion of the ball is uniform'. With reference to the last sentence, it is evidently one thing for the motion of the ball to be uniform (neither accelerated nor decelerated), another thing for the ball to be uniform (homogeneous in consistency). The difference here mustn't be confused with the superficially similar difference illustrated by the distinction between the meaning of 'large round table' where paraphraseable as 'large table which happens to be round', and where paraphraseable as 'table which is large among round tables'. Without denying that 'large' and 'round' are predicates of different kinds, it remains true that on either paraphrase both are predicated of the table. But in the former case the uniformity belongs not to the ball but to the motion, which is an accident thereof. A natural way of stating the contrast would be by saying that all that counts in the case of the table is *the order in which the predicates are applied*, while in the case of the moving ball there is an additional difference in respect of *what the predicates are applied to*.

We can thus distinguish between three kinds of grammatically conjunctive predication all having the surface form 'Ø1 Ø2 A': 'sweet white sugar'; 'large round table'; 'bright red tie'. The conjunction may be *a mere conjunction*. To test for such cases, one asks whether 'Ø1 Ø2 A' yields 'Ø1 A' and 'Ø2 A' in detachment. Thus, as we can move from 'sweet white sugar' to 'sweet sugar' and 'white sugar', the predicative conjunction is a mere conjunction. Second, the conjunction may be *ordered*. Setting out with 'This is a Ø1 Ø2 A', a paraphrastic option exclusive to and hence identificatory of cases of this type is: 'For a Ø2 A, this one is Ø1'. Above, we put 'For a round table, this table is large'. The paraphrase shows that like the conjuncts of a mere conjunction those of an ordered conjunction apply

severally to one and the same object. However, in ordered cases detachment can lead from truth to falsity: a specific table can be a large round table without being a large table; it may be small for a table, though large for a round table. Finally, in some cases the conjoined predicates don't apply to one and the same object. Examine 'The tie is bright red'. While we can say that 'bright red' applies to the tie, 'bright' applies not to the tie but to its (red) colour. This is supported by noting that an identificatory paraphrase of 'This is a $\emptyset 1$ $\emptyset 2$ A', when of this type, is: 'This A is $\emptyset 2$. The $\emptyset 2$ of the A is $\emptyset 1$ '. Thus, 'This tie is bright red' goes naturally into 'This tie is red. Its red colour is bright'.

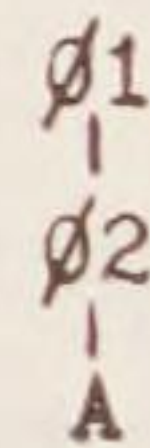
The following schematic figures may be used to display the differences.



Type 1



Type 2



Type 3

A mere conjunction (type 1) is represented by a symmetrical forked structure, indicating the mutual independence of the conjunct predicates. An ordered conjunction (type 2) is distinguished by adding to the former a mark of asymmetry between the predicates — to reflect that the As to which the later predicate (in this case ' $\emptyset 1$ ') applies have been circumscribed from among a wider set of As by the application of the earlier. A conjunction of the last kind is pictured by an articulated linear structure, to capture the fact that the conjunct predicates do not apply to one and the same item, as they do in both cases preceding. In view of the structure of the picture, it would therefore be natural to describe such predicative conjunctions as *stratified*.

Equipped with these distinctions, we can home in on the significance of Leibniz's remark that 'accidents have concrete predicates'. The point is illustrated by the upper two-thirds of the picture of type 3 cases. Evidently, Leibniz is gesturing towards the fact of stratification: to say that an accident can have concrete predicates is to

say, more simply, that a certain general term can be applied to (i.e. predicated of) another. Thus, as he writes, 'an impetus [may be] called great'. Now when a claim of this kind is made, the general term to which another, predicatively operating, general term is applied, will function singularly. So because fillers of the singular frame 'this Ø' must, for syntactic reasons, be nominal in character, the latter general term will be syntactically nominal. 'Impetus' is a case in point.

I will call this syntactic phenomenon *nominality-induction*. Given a conjunctive string of general terms of type 3, unpacking the conjunction consecutively and pair-wise yields singularly operating (hence syntactically nominal) general terms. For any pair 'Ø_m Ø_n', the application of 'Ø_m' to 'Ø_n' requires the latter to appear singularly, and hence induces its nominality. We can see nominality-induction dramatically in action if we take apart a sentence involving an extended conjunction of general terms in predicate place, e.g. 'This tie is very brightly red'. This works out with three singular phrases of the form 'the Ø': 'The tie is red. The (red) colour of the tie is bright. The (bright) tone of the colour is intense'.

The crucial point is now elicited with facility by noting that *stratification figures not only in the upper two-thirds of the picture of type 3 cases, but also in each of the branches in the pictures of cases of the other types, as well as in the lower two-thirds of the former*. So what basic difference is there between 'bright red' and 'red tie'? 'Bright' applies to the colour; 'red' applies to the cravat. If the nominal functioning of the quality term is dictated by the syntactic requirements of predication — if *its* nominal form is induced — why isn't the same the case for the object term?

I don't expect these questions to be taken rhetorically. The analyst's response is after all known: he points out that 'tie', unlike 'red', operates naturally or without undergoing nominalisation as part of a singular phrase of the form 'the Ø'. But it is now easily seen that from Leibniz's vantage point (certainly less drastically displaced from Descartes' than ours) the distinction here lacks ultimate significance.

If our stock of general terms is finite, it follows that some of them will belong to (what is naturally called) a lowest level. (A lowest level

could also exist when the stock is infinite, providing either that the infinity is horizontal or that it is upwardly rather than downwardly or bi-directionally infinite. The first possibility is illustrated by a language containing general terms only for material objects and properties of material objects, and containing an infinite number of both or of either; the second by a language containing a finite number of terms for material objects, a finite number of terms for properties of material objects, a finite number of terms for properties of properties of material objects, and so on.) 'Red' is assessed as being of a higher level than 'tie' because 'red' applies predicatively to the designata of singular phrases like 'the tie'. By contrast, because there is no general term ' \emptyset ' such that 'tie' can be applied predicatively to the designatum of 'the \emptyset ' in the fashion that 'red' applies to 'the tie', 'tie' is classified as a lowest level general term. (Without putting too fine a point on it, lexical items normally classified as common nouns comprise the lowest level.) It can therefore be explained why 'tie', as a condition of singular appearance, doesn't undergo nominalisation, without this difference between it and 'red' being taken to signal any very sharp distinction. Because a lowest level term is by definition a term which doesn't apply predicatively to any other singular designatum, it is always nominal in form. The term's constant nominality does not bear witness to its expressing a content which, unlike the content expressed by a variably nominal term such as 'red', isn't an 'accident of substance'. In sum, the nominal form of terms on the same level as 'tie' is also susceptible, albeit extrapolatively, of explanation by means of nominality-induction. One who endorses the explanation can, by citing the fact that such terms do not function predicatively, assert that nominal form is *normal* for them.

Given the responsibility of the syntactic phenomenon of nominality-induction for the nominality of variably nominal general terms, it appears that the normal nominality of general terms like 'tie' and 'mail-box' might be accounted for in the same way. There is no need for present purposes to insist on the explanation — though I assume that even sceptics will feel that it isn't entirely without appeal; in light of the express Leibnizean stand, it suffices for now that the analyst is dialectically debarred, once the idea of such an explanation

is put forward, from pointing to the differential normal nominality of terms of the latter kind in order to sustain his intuition of a sharp difference from the likes of 'red' and 'bright'. Normal nominality, qua fact about a certain set of linguistic elements, is no less a fact for Leibniz than for him. It is, quite simply, a 'positive' fact which no theorist denies. But that doesn't prevent Leibniz from denying a strong distinction. In short, since normal nominality is also open, *prima facie* anyway, to explanation in terms of nominality-induction, assigning special significance to the fact that our intuitions applaud the analyst's distinction amounts to taking the positive data as their own explanation; amounts, that is, to treating the positive distinction both as *explanans* and as *explanandum*.

If we ponder the matter in a genetic register for a moment, there is even a good deal of plausibility in conscripting the notion of nominality-induction to account for normal nominality. In our immature linguistic encounters with the world, we are typically taught and learn, under similar conditions of stimulation, to reapply what count for our teachers and will eventually count for us as general terms. Normally, the general terms we are first encouraged to use make up a mixed bag, comprising phenomenal words like 'red', 'round', 'hot', 'sweet', as well as object words such as 'table', 'chair', 'apple', 'dog'. Initially, a reapplied term, be it 'red' or 'table', isn't definitely classifiable in the nominal/non-nominal dimension. But hard upon the first stage of term-reapplication conjunctive terms are also introduced, e.g. 'red table', 'round apple', 'hot water'. These are typically learned in some specific order, a fact echoed by the failure of ear of their reversals: 'table red', 'apple round', 'water hot'. In essence, the location of a general term which eventually would be said to be normally nominal is the location of the subject of attribution. Because terms in this location are syntactically nominal — thus, they are open to pluralisation — nominality comes to seem normal for them. So there is a crude analogy between the induced nominality of general terms whose normal mode of functioning is predicative, and the normal nominality of general terms which function without explicit nominalisation in a singular frame.

What of the individuating function? True, a general term like

'table' would normally be contrasted with one such as 'red' on the score of individuating content. Tables are accounted individuals, in the sense that one says of them — what one doesn't say of colours — 'one and the same'. But should the distinction be overestimated? When contrasted with 'table', 'red' would be said to lack individuating content. But considered on its own it possesses sufficient content to ground a distinction with 'blue'. Even though one and the same object can be both red and blue, it must nevertheless, for being both, involve some kind of complexity.⁹ The present point is therefore two-fold. As I shall explain in the next section, the 'positive' fact that we normally count under a term like 'table' but not under one like 'red' fails to show that the very idea of counting under the latter is nonsensical. It only shows that because we are equipped with general terms such as 'table' we do not have need to exploit whatever content the colour term possesses for individuating purposes. This emerges on the linguistic plane in the fact that nominality is normal for 'table', abnormal or induced for 'red'. But if a possible exploitation of the content of the colour term for individuating purposes can be conceived, it follows straightaway that our standard ontology of material particulars, merely because of its standardness, cannot be evaluated as 'objectively right'. From a more comprehensive vantage point it too might be regarded as an ontology of non-substantial (i.e. abstract, dependent) particulars.

Putting the upshot in this moderate way falls short of sustaining the thesis advanced to explicate Cartesian ideational representation. As things stand, it remains possible that the mechanism of specifying items which are ontologically basic from an ideational vantage point is referential. However, we are now in a position to appreciate that, for Leibniz at any rate, the decision that a general term expresses an 'accident' isn't rested on linguistic material, and hence isn't an analytic decision; and we can also see why the metaphysical views Leibniz holds may presumptively be said to have at their core categories *different* from our own, rather than merely to *extend* the latter

9. See W. Sellars, 'On the Logic of Complex Particulars', *Mind*, LVIII (1949). On Sellars' view, qualitative complexity is always based in substantial composition.

past where they are normally taken. (The case of Spinoza is well worth reconsidering here. Because of Spinoza's confusion between bipolar and monopolar dependencies, he often writes as if his decision that a singular phrase like 'the table' specifies a mode only involves shifting the normal line between dependencies and independencies. But, as indicated, in the passage from Book 1 to Book 2 of the *Ethics* a distinction is implicitly introduced which shows that more than a mere movement of the line is at stake. Not only are the items we normally classify as substantial non-substantial according to Spinoza, they are very likely not even modal, in the official metaphysical sense of 'mode' captured by the phrase 'monopolar dependency of substance'. And this shows that the substance/mode distinction for Spinoza differs from the 'positive' distinction that would be marked by means of these labels.) Compatibly with the thrust of the preceding discussion, the burden of the following chapter is to prove that Descartes operates with categories different from those to which our analyst makes appeal.

11. *Loose ends*

Two further matters, which I treat summarily in view of what is to come, will bring the present case to completion. First, if the preceding account is right, it should have the power to explain why we feel — without taking the feeling to resonate with any very significant truth of ontology — that even when a general term like 'red' functions singularly, as so functioning it does not specify a particular. (Thus, I took pains to indicate that the singular phrase in the sentence 'This red is bright' is to be regarded as a particular referring expression. I was obliged to do so because it would not ordinarily be taken in this fashion.) Presented with the claim 'The red (of the tie) is bright', we would naturally construe the singular phrase as a universal designation, in the sense that one who utters the sentence assertively would be regarded as saying 'the same' as he says, so far as the singular phrase goes, were he also to utter 'That red is bright'. By contrast, so far as the singular phrase is concerned, one who asserts 'This tie is red'

could not be construed with any shred of plausibility as saying 'the same' as he would say were he also to assert 'That tie is red'.

An explanation of just the right kind emerges. To be served, the purposes of singular discourse require that some item be effectively singled out as topic for further characterisation. Once an item has been identified, it is uneconomical for the speaker to 'introduce' (in Strawson's handy word) what he wishes to say about it save in entirely general form: by means of a general term operating predicatively. Why employ a structurally more complex sentence like 'This red attaches to this tie' in preference to the structurally thriftier 'This tie is red'? If the singular phrase 'this tie' effectively picks out an item as topic, it is, for intuitively obvious reasons, wasteful of resources to employ the first, relational, form rather than the second, predicative, one. Once the topic has been fixed, it suffices to apply a general term operating predicatively. Because our basic topic-identifying singular phrases include 'the tie' but not 'the red' ('tie' being a common noun, 'red' an adjective), even when 'red' appears as part of a singular phrase it is thus most naturally taken to introduce a shareable characteristic. Contrast the case of terms like 'shod', 'clothed', 'wealthy'. While saying of A that he is shod is saying 'the same' of him as is said of B qua described as shod, we would agree that what makes the one claim true — A's footwear — is not 'the same' as what makes 'B is shod' true — B's footwear (supposing A and B not to don the same shoes serially). There is a contrast here, obviously, because the form 'shod' derives from 'wears shoes', which is relational in character. But if *the reason* underpinning our feeling that 'this red' does not specify a particular is that we never (normally) use it for (basic) purposes of topic-identification, then the feeling cannot be taken to point beyond to any very significant fact of ontology. It is an index, only, of the methodological imperative of maximising economy.

Second, what of the moderate respondent's point that a form like 'This red is bright' needs the gloss 'This red [of the...] is bright'? I never denied that this was so. I only denied that it has the Cartesian implication that one who cognises a dependency *ipso facto* cognises it as a dependency. So again my reaction to the point is a simple one. The need for the blank is a direct function of the fact that 'red' is not

a lowest level term for us: because it belongs to a higher level, it is a conceptual truth that 'red' expresses a feature of something else. Accordingly, the blank is needed. But to take this to confirm the Cartesian implication — and hence to argue that reference is not parochial to non-ideational cognition — is to ignore that the same holds true for standard fillers of the blank. Not that it holds true *for us*: it holds true for Descartes. At any rate, Descartes is obliged for all the reasons supplied to show that a term like 'tie' is not on a par with 'red'. And even if he fails explicitly to acknowledge the obligation (though in the following chapter an attempt will be made to establish that he does acknowledge and try to discharge it) it is enough to note that the obligation is explicitly recognised both by Spinoza and by Leibniz, for each of whom material object designations are not strongly distinguished in character from abstract singular designations.

VI Attributes and Abstraction

The metaphysical core of the probable/certain duality is laid bare. Basic Cartesian categories are shown to be of a broadly Platonic, as opposed to Aristotelian, kind: they are particular-determining, not particular-classifying. The implications of this crucial distinction are displayed in detail. (a) Contemporary commentators are shown to ignore the distinction, with the result that their various refurbishments of the reasoning for Cartesian dualism succumb to the charge of *ignoratio elenchi*. (b) The contrast between the two categorial systems is located in the Cartesian texts. (c) Its links with the preceding ontological and semantic theses are presented. (d) The implications of the contrast for the success of the Cartesian project of intellectual renovation are worked out. (e) More critically, it is shown that Descartes himself never satisfactorily establishes that the categories actually operative in human cognition are Platonic rather than Aristotelian. (f) Throughout, the implications for the dualist thesis, as represented in chapter IV, are illustrated. In the terms of that chapter, the major upshot is that while dualism is understood relative to categories which are paradigmatically exemplified in divine commerce with reality, Descartes fails to establish that human cognitive activity, irrespective of the differences between man and God, does not uniformly involve the wrong, Aristotelian, categories. By probing various Cartesian contrasts, e.g. between 'adequacy' and 'completeness', between 'comprehension' and 'apprehension', Descartes' failure in this regard is diagnosed.

1. *Descartes' burgeoning discontent*

To reconstruct Descartes' position so that the probable conception of things is autonomous is to separate two problems internal to Cartesianism. The less pressing (which isn't to say more tractable) problem is to find an effective way of convincing the probable knower, now that the autonomy of the kind of knowledge he possesses is granted, of the need for him to surpass his domestic condition. It seems that nothing short of the actual delivery of a completed Cartesian science would suffice. Presented with the finished article, the probable knower would open himself to the

charge of wilful obstinacy if he turned a blind eye: the obligation of open-mindedness is surely a minimal obligation of reason, which even he acknowledges. But this minimal obligation is far from guaranteeing a rationally irresistible commitment to something beyond the initial possession. In addition to supplying the end product, it seems that Descartes must also show that the conception of things espoused by the probable knower is itself explained thereby. Some faltering steps in this direction are taken by Descartes in Meditation 6. A second problem, also originating in the autonomy of the probable, is therefore even more pressing. To ensure a hearing from the probable, sense-employing, cogniser, Descartes has to prove that there is a different conception of the world, viz. the certain conception, to which the former's conception may be referred. It obviously won't do for Descartes merely to say that the latter differs from the former. For so differing, it may be inarticulable, save uninformatively, as differing. And worse: for so differing, it may even be nothing. In other words, Descartes must directly specify the mechanisms of certain cognition. The aim of the present chapter is to show how Descartes attempts to meet the second problem, and to explain his failure.

Despite the intricacies of the preceding ontologico-semantic discussion, the interpretative situation remains fluid. I have asserted repeatedly that Descartes' referral of the probable to the certain is transcendent of the former. (I just reasserted it in claiming autonomy for the probable conception.) But this has not in strictness been proven, and the urgency of the second problem might therefore be regarded as overstated. To have shown that Descartes cannot rely on the 'positive' facts in order to explain the nature of ideational cognition isn't quite to have established that the (semantic) mechanisms operative 'positively' aren't the self-same mechanisms which operate ideationally. No attempt was made to camouflage the lacuna here, though the lengthy treatment of the gap between probability and certainty serves presumptively to show that Descartes ought to have committed himself to a thesis of non-transcendentality either as concerns reference or as concerns some other mechanism of world-representation figuring in our everyday intellectual commerce

with reality. As a result of the way the discussion has unfolded, we are now prepared to plug the lacuna. Providing we approach the texts sensitive to the problems which afflict an 'analytic' treatment of the distinction between ideational and non-ideational representation, we find that what Descartes has to say about the ideational aligns neatly with what would be said by one who does indeed take seriously the non-transcendentality of referential, and of semantically allied, mechanisms.

It would however be oversanguine to minimise the complexity of the case. Though Descartes' words fall into place, they do not divulge their message without a struggle. I do not allude here to the by now familiar fact that Descartes' phrasing often suggests the non-autonomy of the probable. This indicates only that Descartes' grasp of the full implications of his own thinking is less than completely secure. Could those of us who undertake a project as ambitious, as revolutionary, be sure of doing better? While it is true, particularly in the *Meditations* and anticipatory texts, that Descartes fails to recognise his commitment to the mutual autonomy of the probable and the certain with sufficient clarity, the complexity has a source deeper than Descartes' misapprehensions here. As we proceed to analyse what Descartes says about the mechanism of ideation, it begins to appear that at some stage after completing his *magnum opus* the strength of the commitment dawned on him — and hence that he overcame his earlier misapprehensions — and that he was troubled by what he saw. The standards for knowledge informing PD, the principle of doubt, are set very high indeed; as high, one might say without hyperbole, as heaven. Specifically, the definitive argumentation for dualism is routed through the divine case. In the *Replies*, the Descartes we meet, though sounding as bluffly confident as before, is struggling to lower his standards for knowledge — notably by introducing the distinction between *completeness* and *adequacy*, and between *apprehension* and *comprehension* — without putting his critique of the senses at risk by relativising the certain to the probable. And these moderating remarks can be read as denying the non-transcendentality of the representative mechanisms of probable knowledge. One of the things I shall be attempting to show

is that to the degree that the moderating remarks are so construable, Descartes is in conflict with himself.

2. Referential ontology: a technical problem?

This thesis was advanced to explicate Descartes' position on non-ideational representation: referential mechanisms of item-specifications are parochial to the non-ideational realm. Expressed more succinctly, the thesis is that referents are not Cartesian ideata. With an assist from W.V. Quine, a seminal modern theorist of referentiality, a weaker thesis can be formulated, and some interpreters might claim that the weaker thesis preserves the difference between the content of an ideational and that of a non-ideational conception of things, and does so without engendering a commitment to any deeper, categorical difference. By examining the texts, we will be able to see that though the weaker thesis does reflect some of the things Descartes says, it is finally unsuitable for interpretational purposes. This will bring us back to the point, to which I attached such importance, that Descartes' general account of ideational incompleteness is subordinate to his special account thereof. As I shall explain, the impression Descartes conveys of categorial uniformity between the ideational and the non-ideational is to a large extent a function of his failure to observe the true order of priority.

According to Quine, the logical counterpart of the normal notion of objective reference is the bound variable of quantification. If we 'regiment' singular discourse patterns in the idiom of (first-order) quantification theory, the idea of a referent re-emerges as the idea of a satisfier of a general term. One who refers to an object, e.g. by uttering 'The table is red', will be found, when the quantificational translation of his words is displayed, to commit himself to a satisfier of the general terms 'table' and 'red'. When we informally paraphrase the quantificational translation, we find him to be asserting that there is some (one) object, x , such that 'table' and 'red' apply (truly) to x , or such that 'table' and 'red' are satisfied by x .

As indicated, reference can be made to what are intuitively regar-

ded as dependencies. One who states 'The red (of the table) is bright' does no less. Such a one — to put it quantificationally — commits himself to a satisfier of 'red' which isn't the same as a satisfier of 'table'. Quantificationally reformulated, his claim contains *two* bound variables, one ranging over colours, the other over material objects: 'There is an x such that x is red and x is bright (and there is a y ($\neq x$) such that y is a table and x is of y)'.

'The table is bright red' and 'The red colour of the table is bright' are closely related in informative content. A speaker who selects the second form for assertion might achieve the same communicative result by suitably applying emphasis to the first, i.e. by asserting 'The table is *bright red*'. The informative coincidence here prompts the suggestion that the variable-multiplicity in the quantificational transcription of the second form is misleading. For Quine, with whom I agree on this matter, 'misleading' is little more here than a term of abuse. If the quantificational transcription of a piece of discourse reveals a multiplicity of variables, there *is* a corresponding referential multiplicity. To justify intuitive repugnance with the second variable, it is necessary to show, in addition to and quite apart from the formalities, that sense can't be made of the notion of a referent for the allegedly 'misleading' variable. The important point for present purposes isn't however a point about the genuineness or spuriousness of the additional variable. The important point is, rather, that our intuitions concerning the disparity between the two variables link up with the distinction between general terms which undergo nominalisation when employed singularly and those which do not. One who, like Descartes, holds that only independent items can be ideated could conceivably argue, therefore, that the variable-multiplicity of the second form is misleading without pointing a finger at referentiality, i.e. without insisting that a subject who chooses assertively to utter the second form is not really referring to the colour. He could argue along these lines by appealing to much the same considerations which we ourselves would appeal to in thetically amplifying our intuitive feeling that the x -variable and the y -variable in the transcription of the second form should not be regarded as being on a par. The resulting weakened formulation of the thesis

would then be this, that none of our *normal* referents are Cartesian ideata, not that referents are in principle disjoint from Cartesian ideata.

A position of roughly the latter type has already been examined, viz. the position that a distinction can be made from among an unpartitioned class of (possible) referents between those which are primary and those which are not. Were Descartes' thinking capable of being adequately represented by the weaker thesis, his problem of segregating ideata from non-ideational representata would be a technical one. So I shall be attempting to show that the problem is not treated by him in a technical fashion. To specify ideata, one cannot set out with the notion of a (possible) satisfier of a general term — a (possible) referent in Quine's sense — and then proceed to make subsidiary distinctions among them, like the distinction based on the 'positive' linguistic difference between normal and induced nominality, or some more subtle distinction. The strongest distinction that can be made among satisfiers, from the vantage point of the very logic of the notion of satisfaction, is too weak to do justice to the distinction, vital to the Cartesian position as a whole, between the objects of an ideational ('certain') mode of representing the world and the objects of a non-ideational ('probable') mode of world-cognition.

3. *Completeness and dualism*

Subject to the formal qualifications of V.8, we can agree that when a general term undergoes nominal transformation as a condition of functioning singularly, the resulting singular phrase refers to a dependency. The singular phrase in 'This red is bright' thus specifies a dependent particular. On the weakened form of the explicative thesis now up for consideration, the kind of contrast involved here is important to Descartes, and the problem facing him is that of determining, for any general term ' \emptyset ', whether or not, when it functions singularly, the resulting singular phrase picks out a substance or independency. One who proposes so to reconstruct Descartes' thinking must at the very least do justice to the gulf

between the probable and the certain. He is consequently prohibited from taking Descartes to solve the problem by relying on the low-level fact that our normal common nouns — ‘table’, ‘chair’, and the like — would be said to function singularly without having been processed nominally. It is in other words a firm condition of successfully attributing the weakened thesis to Descartes that he be represented as denying probative force to the low-level fact. Our mundane intuitions here amount merely to this, that terms such as ‘table’ and ‘chair’ do not appear to be transformed nominally in the course of moving from predicate to subject place. But arguments, rooted in the classical sources, have already been supplied which show that Descartes wouldn’t regard these features of workaday discourse as the last word.

The physiognomy of the problem, so viewed, can now be portrayed with proper generality. The content of a general term is a universal. This is no less true for ‘table’ than for ‘red’. The former applies or may apply to various objects, just as the latter: both terms express something common to various objects. Assuming that Descartes addresses the problem in this form, he should have something to say which lends itself to interpretation as a response to the following question: given an unpartitioned stock of general terms ‘ $\emptyset 1$ ’, ‘ $\emptyset 2$ ’, ..., when does ‘the \emptyset ’ pick out a substance, when does it specify a dependency? In Quinean terms: when are the satisfiers of ‘ \emptyset ’ substances, when dependencies?

We can check this proposal about the nature of Descartes’ problem by examining what he says of the distinction between minds and bodies. These count for him as independent substances. On what grounds are they so classified? ‘*I understood in a complete manner what body is [and] I understood also that mind is something complete*’ (Replies 4/98). Descartes claims to have a non-fragmentary cognition of each, ‘a cognition which we had not, by an intellectual abstraction, rendered *inadequate*’ (ibid./ibid.). So if the unpartitioned stock of general terms contains both ‘mind’ and ‘red’, the question is how ‘this mind’ is distinguished by Descartes from ‘this red’.¹

1. See footnote 3 below.

In terms of the official grammar of 'idea', Descartes' assertion that he has adequate cognitions of mind and of body which are different means that he *has an idea* of mind, and *has an idea* of body, and determines by inspection that these ideas don't intersect in content. Since the cogniser is entitled to infer from ideas to 'the truth of things', it follows that minds and bodies are really distinct.

Disconcertingly, this last assertion has the ring of sheer assertion. Until all other avenues turn out to be blind alleys, it must therefore be a critical liability of the weak interpretation that it gives the disconcerting impression a seal of approval. Obviously, Descartes is under an obligation to do more than reiterate, however emphatically, that 'mind is distinguished from body not by a mere fiction or intellectual abstraction, but is known as a distinct thing because it is really distinct' (ibid./103). At the very minimum, he must prove that the representations of mind and of body on which his conclusion is rested are indeed ideas. But if the weak interpretation is correct, it is difficult to see how anything he might say here could advance his cause. By 'advance his cause' is not meant 'prove the dualist thesis'. The point, once again, is that even prior to proving the thesis, Descartes incurs a more important obligation: the obligation of explaining the nature of such a proof. If, however, it is admitted that 'mentality' and 'redness' belong to a uniform class, the claim that 'this mind' is in a different case than 'this red' continues to resound of sheer assertion. To be sure, this by itself does not suffice to overturn the interpretation, since here as elsewhere Descartes' thinking might be confused. However, the very difficulty of seeing how Descartes could discharge the obligation along these lines tells us exactly what to look for in order to evaluate the interpretation definitively. If the interpretation is correct, the most Descartes can do is introduce general terms which are not part of our normal stock, and argue that their specific *content* furthers his dualist result. Accordingly, should Descartes ever make a stronger point than the point that the universal notions he employs in arguing dualistically are different in content from any general terms found in our everyday repertoire, viz. the point that they are different in *kind*, that would show the interpretation to be unsound. Should he say this last, it will follow

that he does not set out with an unpartitioned class of general terms, and only then proceed to make subsidiary, technical distinctions among them.

On close scrutiny, we find Descartes making precisely the expected claim. He asserts that the universal conception of mentality which informs his dualist reasoning differs fundamentally — i.e. in kind and not merely in content — from the universal conception of, say, redness which is part of our normal descriptive battery. It differs in just the manner necessary for purposes of beating back the charge that ‘this mind’, as it figures in specifications of the dualist thesis that minds and bodies are really distinct, is in the same case as ‘this red’.

4. *Two conceptions of universality*

The claim is made, though not explained, in the course of debate with Gassendi. Gassendi’s understanding of universality is familiar to commonsense: *‘the mind, from seeing Plato, Socrates, and the resembling natures of other men, is wont to form a certain common concept in which they all agree, and which can hence be reckoned the universal nature or essence of man, in so far as it is understood to be applicable to every man’* (*Objections* 5/183). This Gassendi takes to tell against Descartes’ dualist reasoning, on the grounds that Descartes’ own notions of mentality and corporeality are ‘common concepts’ or ‘universals’ of the specified kind. At first sight, it appears that Descartes will have to meet the objection on its own terms. For, e.g. at *Principles* 1.59, he frames an identical account of universality. ‘Universals arise solely from the fact that we avail ourselves of one and the same idea in order to think of all individual things which have a certain similitude’ (/242-3). In light of the overlap, it would seem that Cartesian dualism could therefore be sustained only by dogmatic fiat. If mentality is universal notion on a par with redness, then ‘this mind’ might be in precisely the same boat as ‘this red’, viz. a singular specification of a dependency, a non-substance. But note what Descartes actually offers in response to his critic: ‘I do not conceive of universals in the same way as [the dialecticians]’ (*Replies* 5/226). In the

passage just quoted from the *Principles* has he not however framed an indistinguishable account of universality? So unless Descartes is very much deluded (or very much lacking in integrity) we may expect there to be a second notion of universality which he actually uses in arguing for dualism, a notion differing from that of 'the dialecticians'. (Who are these dialecticians? I will supply an answer shortly.)

Descartes states that the type of universality he works with differs from Gassendi's type. If so, then Gassendi's objections are irrelevant to Descartes' dualist reasoning. Because of the difference on universality, it follows that no Gassendian 'ontological' distinction could match a distinction supported — supported whether well or badly, I emphasise — by a Cartesian ontologist. By perusing how Gassendi speaks about universality, it is possible to see that Descartes' reaction isn't an *ad hoc* defensive reflex. Note the linkage in Gassendi's formulations between universality and sense-perceptual cognition, a linkage visible in the identical account of universality Descartes himself sketches at *Principles* 1.59. Gassendi speaks of the mind 'seeing Plato, Socrates, etc.'; Descartes, in turn, employs the idioms of sense-perception in the mentioned passage: 'when we see two stones...; and when afterwards we see two birds or two trees' (/243). So a universal in Gassendi's understanding is, nearly enough, an abstracted similitude obtaining between a number of sense-perceived particulars. A salient resemblance between a number of such particulars, e.g. in numerosity or in colour or in shape, will lead them to be grouped together into, respectively, the class of, say, couples, red objects, and pentagonal items: the universal in each case captures the relevant feature of resemblance. (Without worrying about the difference, clarified by Frege, between the logical character of a number and of a colour term — a difference missed by most of the historical protagonists — we could say, in a linguistic register, that such universals correspond to predicate-abstracts.) Despite the objectionably genetic slant of both texts, the root point is that universal notions of the type in question are integrally bound up with a sense-perceptual mode of experience. The point therefore lends itself to recasting, this time meaning-theoretically, as a point about the logical or semantic character of such universals. Qua expressing

features of resemblance between items which are, or can be, sense-perceptually cognised, their defining conditions of application are sense-perceptual conditions.

The cutting edge of Gassendi's objection is that because of the nature of such universals, no dualist result like Descartes' can validly be based on them. For one thing, the saliency of a resemblance is *inter alia* a function of the character and purposes of the cogniser who is impressed by it. In an intelligible sense, classifications employing universals of this type are therefore conventional. (It is worth calling to mind here how Strawson's basic ontological classification, viz. 'middle-sized physical object', implicitly makes reference to the classifying subject, who supplies the 'size' standard. But why may not extremely large, and extremely small, physical objects, along with those of human dimension, together constitute a more natural class?) However, the dualist thesis is certainly advanced by Descartes as wholly non-conventional.

So Descartes agrees with the content of Gassendi's objection. Should the universal principles of grouping be of the explained kind, no 'objective' ontological result could defensibly be based on them. Descartes' concurrence here is firmly anchored in features of Cartesian doctrine we have already examined at length. For example, he maintains that his 'scientific' reasoning doesn't rest 'on any other principle than the infinite perfections of God' (Discourse 5/108). Since 'God is possessed of no senses' (*Principles* 1.23/228), the dualist thesis is not routed through universals of this type. (Cp. Spinoza's claim that 'God does not know things through abstraction, or form general definitions [in the way that] we give one and the same definition to all the individuals of a genus, as for instance all those who have the outward appearance of men' (Letter to Blyenbergh of 5 January 1665/333: passage rearranged).) Less obscurely, it is all one to say that a universal term expresses a similitude between particulars sense-perceptually encountered and to say that the term is bound up with the 'R = V(o)' schema. As we saw, cognition whose representative content is bound up with the schema is, in the idiom of the *Rules*, 'artistic' as opposed to 'scientific', the implication being that it distortively fragments the 'objective' state of affairs. Isn't this

exactly Gassendi's allegation? But if Descartes agrees, and if he isn't being evasive, how can the allegation have any force?

We can now see more clearly why Gassendi's whole conception of cognition is non-scientific from Descartes' vantage point.² The generalisation eased so gingerly onto Descartes' treatment of the statue-example — viz. that what is said of 'tiny' extends to 'statue' — applies straightforwardly to Gassendi's thinking. Gassendi's basic view of the cognitive nexus implicitly invokes the 'R = V(o)' schema. Thus, the universals under which particulars are grouped, e.g. manhood, are aspectual in character. And the concrete general term 'man' on which the latter is based also therefore has this character.

A similar moral must be drawn from Descartes' debate with Arnauld. Like Gassendi, Arnauld speaks the language of a theorist dug in on the left side of the probable/certain divide. Revealingly, Arnauld suggests that '*body [might] be...related to mind as genus is to species*' (*Objections* 4/82). But genera and species are listed at *Principles* 1.59 among the universal notions which are metaphysically taboo, and whose proscription is traced back by Descartes to their connection with the sense-perceptual experiential nexus. Without denying that Arnauld's suggestion may in the end be right, the more important fact is that the point he makes against Descartes is far stronger than is usually recognised; indeed far stronger than Arnauld himself realises. His point isn't merely that Descartes hasn't established the dualist result — something which could be, and was in fact, alleged even by philosophers who accept Descartes' conception of certain knowledge. Arnauld's point — for all the man's acuteness unknowingly it therefore seems — is that the very mechanism of Descartes' argument for dualism is such that the thesis cannot in principle be established. That this is so emerges once it is recognised that whatever additional conditions for substantial distinctness Arnauld might specify, they could not, providing they remain compatible with his home terms of discussion, be sufficiently strong for Cartesian purposes. Even if Descartes convinces Arnauld that

2. This would be true even if Descartes could be shown to be committed to a thoroughgoing materialism.

body isn't a species of mind, the latter's scepticism could be renewed by means of the suggestion that both minds and bodies are species of a further genus. Reconsider Descartes' apparently anguished insistence that 'mind...is known as a distinct thing because it is really distinct' (*Replies* 4/103). Minimal respect requires attributing to Descartes as clear an understanding as we have of the difference between undefended assertion and proof. But Descartes could have accomplished something by reacting thus, viz. making his critic aware that whether dualism is proved or not, the argumentation supplied is at least of a kind suited to proving it (and, by the same token, to disproving it).

To Gassendi and to Arnauld, the correct Cartesian comeback is wholehearted agreement with the descriptive content of their objections and repudiation of its critical pertinence to the case. Descartes knows full well that if, in arguing dualistically, he operates with universal notions of the kind employed by the pair in reconstructing his reasoning, he could not establish any conclusion appropriate for incorporation into Cartesian science. But he denies that he is in the antecedent condition.

Descartes' alternative remains to be described. Still, I should add that in one respect I have handled his reaction carelessly. In replying to Arnauld Descartes remarks that the notions with which he operates are notions which have not been rendered inadequate 'by an intellectual abstraction' (*ibid.*/98). More careful attention should be paid to the tell-tale qualifier 'intellectual', which hints that there may be other sorts of abstraction — of a non-intellectual sort, therefore. The difference gestured at here is illustrated more clearly by Descartes' exchange with Gassendi, where great weight is placed on the distinction between 'images' and 'ideas', and where Descartes insists that the notions figuring in his demonstration are not in the nature of images. The sharp distinction here will exercise us in due course.

5. Cartesian universality: some indications

Consider this remark from Descartes' codification of the argument of Meditation 2.

Thought is a word that covers everything that exists in us in such a way that we are immediately conscious of it. Thus all the operations of will, intellect, imagination, and of the senses are thoughts (*Arguments Drawn up in Geometrical Fashion*/52).

On the evidence of Principles 1.59 a word which 'covers' a multiplicity of items is a universal in Gassendi's sense. It specifies a feature common to all: an abstracted similitude. Thus Descartes explains that

when we see two stones, and without thinking further of their nature than to remark that there are two, we form in ourselves a certain number which we term the number of two; and when afterwards we see two birds or two trees...we again take up the same idea we had before, which idea is universal (/243).

So, it seems, 'thought' collects volitions, intellectual states, and imaginative acts in the same fashion that 'two' collects pairs of stones, birds, and trees.

The problem for Descartes could scarcely be plainer. If the universal notion of number is nothing but an abstract intellectual construct or 'mode of thinking' (*Principles* 1.58/242), then given that Cartesian dualism is based on arguments employing universal notions — mentality and corporeality — comparable in character to the former, how could objective validity attach to the dualist result? Even by Descartes' own admission, it couldn't; in *Replies* 4 he states that the dualist result would be disqualified were it based on notions tainted by 'abstraction' (/98). Aren't we forced to assess his claim that body and mind are substantially distinct because 'thought' differs in content from, say, 'divisible' (see *Meditations Synopsis*/141; Meditation 6/196) as no more creditable than the claim that pairs of material objects and red material objects are substantially distinct because 'two' and 'red' are disjoint in content?

We are driven to this bleak verdict only if the various notions appearing in these last arguments are comparable. But Descartes

insists that his dualist reasoning isn't vitiated by the inclusion of 'abstract, inadequate, cognitions'. He is therefore committed to claiming some fundamental difference in nature between the (universal) notion, mentality, as it figures in the defense of the dualist thesis, and the (universal) notion, redness, as it figures in the argument of the preceding paragraph.³ It is the difference here, connected with the sharp divide between ideational and non-ideational representation, that I am attempting to clarify. There are, to repeat, two distinct conceptions of universality, only one of which is bound up with the 'R = V(o)' schema.

The problem raised stems from the fact that Descartes' assertion of the notion of thought that it 'covers' those things it covers seems not to imply any contrast between the notion's nature and the nature of a clearly abstractive universal such as is expressed by 'red'. Preparatory to assembling the textual evidence for a contrast here, let me sketch an alternative interpretation of the term 'cover', an interpretation whose ascribability to Descartes would commit him on a charge of saying one thing but doing another.

Begin with a term 'A', which collects 'B', 'C', 'D', etc. 'Polygon', for instance, collects 'triangle', 'quadrilateral', 'pentagon', etc. It would be natural to say that 'A' is *wider than* each of 'B', 'C', 'D', etc.

How might the phenomenon of greater width be explained? In the example offered, it would be natural to explain A's greater width by noting the term's relative abstractness *vis-à-vis* 'B', 'C', 'D', etc. 'Polygon' means 'straight-sided closed plane figure', while 'triangle' means 'three-sided straight-sided closed plane figure'. The former is in an immediately intelligible sense more abstract than the latter, since it abstracts from the numerosity of sides. Just so, recurring to the section's opening quotations, it might easily be claimed that 'thought' collects 'volitional act', 'act of intellect', etc. in the same fashion.

When one term is wider than others by dint of this kind of relative abstractness, Descartes is obviously however barred from using it to

3. If colour has some place in Cartesian science, there will be a notion of redness therein. Here and below, it is to be understood that when I speak of colour I am speaking of it qua grasped by the non-scientist.

collect the latter. Its greater width is due to an indeterminacy in its content, and on Descartes' own admission the dualist reasoning has got to steer clear of 'cognitions rendered inadequate by abstraction'.

Is there no alternative explanation of greater width? The word 'presuppose' hints of a different pattern of collection. When the applicability of each of 'B', 'C', 'D', etc. presupposes that 'A' applies, then the latter, while collecting the former in virtue of this fact, need not be relatively poorer in content. Bearing this in mind, compare the internal relations between the members of these two quartets, each of whose left hand terms collects the terms to its right:

polygon: triangle, quadrilateral, pentagon

colour: red, blue, green

Anything red must be coloured. Similarly, any triangle must be polygonal. If something is coloured, it must be one of red, blue, green, etc. Similarly, if something is polygonal, it must either be triangular, or quadrilateral, or pentagonal, etc. But while we recoil from saying that being a triangle *presupposes* being a polygon — the first, we would say, *entails* the second — less opposition is felt to the assertion that being red presupposes being coloured. If so, there seems to be a difference between the styles of collection which we might coarsely cash as follows. (a) Colour is a whole which includes red, blue, green, etc., and hence is *more than* each of these. Conversely, (b) the condition of polygonality is a part of each of the conditions of triangularity, quadrilaterality, etc., and hence the latter are more than the term which collects them: the collecting term is, in other words, *less than* each of the terms it collects.

Consider another quartet:

snow: snowball, snowflake, snowdrift

The internal relations are as before: any snowball must be snow, and if something is snow, it must either be a snowball, or a snowflake, or a snowdrift, etc. However, unlike the condition of polygonality, the condition of being snow seems to have a measure of genuine independence of the conditions which the terms to the right of the colon express. A snowball can be made into snowflakes, because its snow can be reshaped. The polygonality of a triangle resists any comparable manipulation, even in thought. The word 'presuppose',

qua hinting that the presupposed notion is prior to and hence has a measure of independence of the notions which presuppose it, can be pressed naturally into service here, to mark a contrast with the relation captured by the word 'entail'.

Neither the lexicon nor the examples are of critical importance here. The fact of record is that (what has been called) the presupposed condition can be described in an intuitively natural way as *wider than* the presupposing conditions without *ipso facto* being felt to be more abstract. And this means that the presupposed condition's universality is non-Gassendian.

Scouring the Cartesian *corpus*, we find a number of expressly self-explanatory claims which point in the direction of the view that notions like 'thought' and 'extension' collect for Descartes along presuppositional lines. If so, it would be explained how a man who places an indelible metaphysical stigma on notions which collect in virtue of their relative abstractness could in good conscience have allowed himself to frame his metaphysical argumentation as he does.

Here are four passages. In a Letter to Elizabeth of 21 May 1643: 'the notion of extension...entails the notions of shape and motion; and...the notion of thought...includes the conceptions of the intellect and the inclinations of the will' (/138). In the *Principles*: 'all else that may be attributed to body presupposes extension, and is but a mode of this extended thing' (1.53/240). In *Notes Against a Programme*: 'thought itself [is] the inward source from which these modes [of thought] arise'(/436). In a Letter to Arnauld of 29 July 1648: 'by "thought" I do not mean some universal which includes all modes of thinking, but a particular nature, which takes on all those modes, just as extension is a nature which takes on all shapes' (/235).

Despite the instability of the language — 'include' is used in diametrically opposed senses in the first and last passages — we see several things. Descartes is struggling to block a construal of the basic *termini* of his dualist argumentation — thought or mentality and extension or corporeality — as universals in the sense of being more abstract than the items they collect. He thus insists that 'thought' does not mean 'that which is common to acts of volition, imagination, and so on', in the way that 'man-hood', on Gassendi's

description, means 'that which is common to Plato, Socrates, etc.'. Of course, every volition, imaginative act, etc., is a *cogitatio*, a thought. What Descartes intends, more exactly, is that thought is not common *in the way* that man-hood is. The suggestion that thought *underlies* specific modes of thinking points towards the feature of the snow-example which is clearly absent from the case of the polygon: the left hand notion in the former trio has a measure of independence of the right hand ones, and the contrast, *prima facie* at any rate, underwrites differential use of a term like 'presuppose'. And so, Descartes expressly notes that 'generic unity adds nothing real to the nature of the single individuals it unites' (*Replies* 2/38). As mentioned, the texts cited are, by design, explanatory in character. That Descartes isn't altering his *explanandum* finds confirmation in the fact that the term 'presuppose' has already appeared in the dualist argumentation of the *Meditations*, which the texts are designed to explain. In Meditation 6 he writes: 'this active faculty [capable of forming and producing those ideas of sensible things] cannot exist in me [inasmuch as I am a thing that thinks] seeing that it does not presuppose thought' (/191). Though he may of course be accused of error, Descartes cannot therefore fairly be charged with introducing a nominal distinction after the fact, in order to confound, but not rebut, his critics.

6. *Inclusive vs. abstractive collectors*

Guided by these differences, it is natural to characterise the left hand term in the colour-case as an *inclusive collector* of the right hand terms. By contrast, the left hand term in the polygon-case is aptly described as an *abstractive collector*. It is easy to see that Gassendian universals are collectors of the latter kind. So to judge by Descartes' dismissive treatment of such universals in the *Principles*, it follows that no idea in the strict sense duplicates the content of a Gassendian universal; follows, that is, that Gassendian universality is integrally bound up with an inadequate or non-ideational conception of things. Now inclusive and abstractive collectors both are general notions. Consequently, the way formally to mark the distinction between

them cannot be by means of the concept of generality. It must be marked, rather, by means of the concept of abstractness.

Because it remains to be seen what hangs on the distinction between abstractive and inclusive universals, I can't pretend that the following contrast, which I thereby set down mainly for future reference, is fully intelligible as yet.

Qua universal, Gassendian universals are general. But from an ideational vantage point they are abstract. Cartesian universals — i.e. those general contents of thought of which there may be ideas and which can hence be enlisted in Cartesian argumentation for dualism — are by contrast non-abstract. Particulars individuated as instances of Gassendian universals will therefore qualify from the perspective of Cartesian ontology as abstract, while any item individuated by means of a Cartesian general idea — an inclusive universal — will qualify as a non-abstract particular. And so, as I indicated, Descartes doesn't attempt to determine whether or not a representatum is complete solely by reference to a workaday difference like that between common noun and adjective: the status of 'table' as a common noun is in his view no basis for classifying tables as non-abstract particulars. Rather, as we shall see in more detail later, Descartes assesses the abstractness of a general notion by asking whether he 'has an idea' of it. Descartes contends that he does have an idea of mentality, and a (distinct) idea of corporeality. It follows that Gassendi's objections to the dualist thesis are founded on a misconception of what Descartes thinks its nature to be.

I have lately spoken of an inclusive *universal* as an ideatum. Previously, I claimed that strictly speaking only substances can be ideata. But aren't substances *particulars*? One aim of the following discussion is to dissolve the perennial difficulty of deciding whether Descartes, in arguing dualistically, is arguing about particulars or about something else. The problem will be overcome when it is recognised that because of the nature of the basic Cartesian categories a decision here is of little importance to Descartes.

What I have called 'inclusive universals' go by the more familiar name '(principal) attributes'. The illustrations of inclusive universality above suggest an illuminating analogy between attributes

and determinables. The relation between the general notion, colour, and particular colours, red, blue, green, etc., is the relation between a determinable and its determinates. On the suggested analogy, a principal attribute includes what it includes in the way (whatever way it be) that a determinable includes its determinates.⁴ There is even a textual basis for crediting the suggestion: as I indicated earlier, when Arnauld proposes that mind and matter might be related as genus and species, Descartes is quick to state that his two notions cannot be so related. I will now move to show that a Cartesian attribute can fruitfully be viewed on analogy with a determinable. Formally, the links between Cartesian attributes and modal properties are akin to those which bind a determinable and its determinates. Making this out will put us in a position to specify the exact mechanism of Descartes' dualist reasoning.

7. Principal attributes and determinables

We may begin with the thesis, fundamental to Descartes' dualist reasoning, that 'there is always one principal property of substance which constitutes its nature and essence, and on which all the others depend' (*Principles* 1.52/240). There is a uniquely identifying transition from

(1) F-ity is a principal attribute

to

(2) The substance whose attribute is F-ity is F-substance.

'Of the...attributes which constitute the nature of things, it cannot be said that those which are different, and of which neither is contained in the concept of the other, are co-existent in one and the same subject, for that is equivalent to saying that one and the same subject has two different natures, and this involves a contradiction' (*Notes Against a Programme*/436).

A parallel transition can be made for modal properties. A

4. In the coming chapter I will alter the suggestion slightly. The term 'analogy' should therefore be taken quite seriously here.

substance having shapes can be called 'shaped substance', and one which moves 'mobile substance'. But no substantial distinction follows here: one and the same substance — extended substance — is shaped and moves. The passage from (1) to (2) for modal properties tells us only *how* a substance is, not *which* substance it is. This suggests that a which or substantial distinction is (or comes to) a particularly strong grade of how or modal distinction. Circularly described, — it is that grade of distinction such that if S1 is how-1 and S2 how-2, then S1 is substantially distinct from S2.

The very request that the degree of strength be specified non-circularly is likely to meet with a derisive howl. In light of the claim that 'the nature of a mode consists in this, that it can by no means be comprehended, except it involve in its own concept the concept of the thing of which it is a mode' (ibid./440), a critic will deny that modal and substantial distinctions lie on a scale. The truth of the matter — the critic will add — is that a modal property is *tagged* as modal *vis-à-vis* some specific substance from the start. This means that the mode mobility, say, is tagged as a mode of extended substance, tagging being canonically accomplished by reference to the essential attribute expressing a substance's substantial nature. So — the critic concludes — the move from (1) to (2) is defined for substantial properties only.

The texts fall short of fully supporting this claim. Descartes writes that to sustain a substantial distinction between thinking and corporeal substance 'we carefully separate all the attributes of thought from those of extension' (*Principles* 1.54/241). (These words indicate how Descartes uses 'attribute' both for modal and for essential properties. I will qualify the term where clarity requires.) Were the argument for dismissal right, no real support would accrue for a claimed substantial distinction by considering successively more modes of each.

The dispute here can be given a very sharp form. If modes are tagged, then the proof of a substantial distinction between mind and body would be a breezy hop, step, and jump affair: first it is noted that volition, say, is a mode of the essential property thought; then that mobility, say, is a mode of extension; finally, noting that thought

≠ extension, the conclusion is drawn that thinking substance and extended substance are distinct. But though Descartes' arguments sometimes seem to duplicate this pattern, e.g. in Meditation 3 and, by implication, at *Principles* 1.53, when it comes to staving off his objectors Descartes in effect declares that such presentations are summary or truncated forms. In *Replies* 4, for instance, he expands considerably on the notions of adequacy and completeness, making clear that, contrary to the impression perhaps created by the *Meditations*, these belong to the proof's very clockwork. On the preceding view, completeness and adequacy are however ornamental. On that view, in the word of one commentator, Descartes' mention of these notions only 'vivifies'⁵ his basic reasoning, but is irrelevant to its root character.

It is enlightening to note how Descartes appeals to the notion of *reciprocal exclusion* to clarify the strength of a which — a substantial — distinction: 'not only do we understand that [the mind] exists apart from the body, but also that all the attributes of body may be denied of it; for reciprocal exclusion of one another belongs to the nature of substances' (*Replies* 4/102). And again: 'there is no better proof of the distinctness of two things than if, when we study each separately, we find nothing in the one that does not differ from what we find in the other' (ibid./ibid.). On the above three-step argument, it would *follow from* the reciprocal exclusion of two substances identified via their essential properties that no mode could be shared. But Descartes here virtually equates the claim that reciprocal exclusion is of the nature of substantial distinctness and the claim that all the attributes (sc. modal properties) of one substance may be denied of another. This supports the contention that, metaphysically speaking, reciprocal exclusion of substances does not precede the unattachability⁶ of the modal properties of one substance to a second. However, wouldn't it be

5. S. Schiffer, 'Descartes on His Essence', *The Philosophical Review*, LXXXV (1976), p. 39.

6. I say 'unattachability', in preference to speaking of 'non-ascribability' of modal properties, because it is not as yet clear what sort of connection Descartes has in mind. Descartes uses the phrase 'deny of'. This should not hastily be glossed as 'falsely ascribed to' until it is determined what connection Descartes is thinking of.

going too far to maintain that the difference of modes of one substance from those of another is a *criterion* of their substantial distinctness? After all, Descartes cites reciprocal exclusion in explaining the character of distinctions between different modal properties of a single substance: 'As to [modal] distinction, its characteristic is that we are able to recognise the one mode without the other and *vice versa*' (*Principles* 1.61/244).

We find ourselves backed into a cramped corner. Reciprocal exclusion of modal properties, while appearing to be a relatively direct expression of substantial distinctness, is clearly too weak to sustain distinctions of a substantial grade, since it also applies to the modal properties of a single substance.

Suppose then that modes are tagged by reference to principal attributes. Any question about the substantial affiliation of a modal property would under these conditions bespeak confusion in the questioner. Once a question like 'Is wondering a bodily state?' is fully spelled out, i.e. in the form 'Is wondering, which is a mode of thought, a mode of extension?', it would automatically answer itself. How then could the reciprocal exclusion of modes even presumptively be advanced as relevant to proving a substantial distinction? Alternatively, if the question of exclusion is ill-defined outside the range of a single substance's modal properties — it would as such be a question about whether two modal terms pick out the same or different modes — then it wouldn't be germane to whatever it is the citation of which suffices to prove that two substances are distinct.

I see only one way of negotiating the dilemma. Providing reciprocal exclusion of modes of different substances is regarded as applying not *consecutively pair-wise*, but rather to the *totality* of modes of different substances, then the distinctness of substance S1 from substance S2, and the reciprocal exclusion of the respective totalities, work out as different faces of the same metaphysical fact. The preceding puzzle is therefore solved without recourse to textual amputation. Reciprocal exclusion applies as much to the relations between modes of different substances — on condition that the modes are taken in their totality rather than pair-wise — as distinctness

applies to different substances themselves. So the internal relevance of reciprocal exclusion to Descartes' proofs is secured; secured, because the notion of tagging now plays no role: substantial distinctness works out as reciprocal exclusion of modal totalities.

This proposal for solving the problem is laden with difficulties of its own. But up until the point past which these difficulties arise, the proposal at least sustains the analogy between the attribute/mode and the determinable/determinate pairs. A determinable is completely exhausted by its determinates; it is not something over and above the latter: that no determinate colour is a determinate taste *amounts to* a distinction between the determinable, colour and the determinable, taste. It would be appropriate, therefore, to equate a determinable with its determinate range. But if a determinable is (=) its determinate range, a rationale is provided for Descartes' otherwise curious talk of the need for a 'complete' grasp of mind and of body as a condition of establishing their distinctness. To be sure, it is impossible to hold that the distinction between mind and body is perched by Descartes only on the contention that mentality and corporeality are (different) determinables. After all, that no colour is a taste does not prevent one and the same object from being both red and tart. Part of the response here consists in saying that the comprehensiveness of the determinable-analogues to which Descartes appeals in arguing dualistically is vastly greater than that of the determinables introduced for illustrative purposes. This, however, constitutes no more than part of a response because it continues to be unclear how the distinction between a determinable, qua inclusive collector, and a universal notion which is an abstractive collector, amounts to a distinction in kind as opposed (merely) to a distinction in content. I suggest that the former difficulty will be subdued as a corollary to overcoming the latter — which is therefore more important. We can edge towards making a quantum gain here if we ponder for a moment just what the determinable/determinate pattern might be chosen by a philosopher to contrast with.

Typically, hence apart even from special Cartesian concerns, the determinable/determinate pattern is contrasted with the genus/species pattern. As just stated, a determinable is not something over and

above its determinates. By contrast, a generic notion is independent of its specifiers. Thus, while a species can be defined by *adding* a difference to the genus, no determinate lends itself to corresponding definitional construction. By the same token, one can check to see whether a particular satisfies a generic content, and come up with a positive answer, even if the species to which the particular belongs remains an unknown. But in checking whether an object falls under a determinable, one's decision that it does is the same as the decision that it falls under such-and-such a determinate of the determinable. The contrast here has nothing to do with the availability of a term for the (respective) species and determinate. Even if we have not previously encountered a determinate colour — puce is a favourite example — and therefore do not possess its accepted or conventional name in our vocabulary, directly establishing that an object which is so coloured is coloured involves doing enough to supply the name. Should the colour be dubbed 'Ø', it would eventually emerge that 'Ø' and 'puce' are synonyms. By contrast, even if the animality of a particular object is established by observation, the question of its species (or any other sub-generic class) can well remain open. In such a case, the choice of a sub-generic name for the individual most likely amounts to the choice of a sheer label, to be filled with meaning later on. It would be purely fortuitous if, having chosen the sound 'marsupial' as a name for the wider class of animals to which a kangaroo belongs, a subject were to find that this sound has the meaning supplied in a dictionary.

This answer exploits the standard contrast between the determinable/determinate pattern and the genus/species pattern. It was observed earlier that Descartes continually treats the latter critically. The answer therefore comports well with some uncontroversial textual data. More substantively, it is relatively easy to see how the mentioned contrast links with the difference introduced above between inclusive and abstractive collectors. Generic notions are of the latter kind; paradigmatically so: they collect because they are poorer in content than the specific notions they collect. Full marks will therefore have been earned by the answer if we can convincingly explain why philosophers who argue in genus/species terms count

for Descartes as dialecticians, whose results in ontology are perforce different in character than his own.

8. Enumeration texts

I have been scrupulous to claim no more for the idea of a determinable/determinate link than analogical power to illuminate the relation between principal attributes and modal features as it figures in Descartes' dualist argumentation. Nor did I omit to enunciate difficulties with the analogy, chief among them the problem of discerning a strong difference — a difference of kind — in the contrast between determinables, aligned with inclusive collectors, and abstractive collectors. Making no pretense of having yet overcome this difficulty, let me now supply the textual backing for maintaining that Descartes' remarks about reciprocal exclusion, which make poor sense if principal attributes are abstractive collectors, bear on the root character of his dualist thinking.

A relevant overarching comment occurs at *Principles* 1.11: 'we know a thing or substance so much the better the more properties we observe in it' (/223). Unless principal attributes relate to modes roughly as determinables relate to determinates, the statement seems entirely gratuitous. Consider also the assertion in *Replies* 4 that 'mind can be perceived clearly and distinctly, or sufficiently so to let it be considered to be a complete thing without any of those forms or attributes by which we recognise that body is a substance ...; and body is understood distinctly and as a complete thing apart from the attributes attaching to the mind' (/99-100). Here, 'attribute' means 'modal property'; the plural would otherwise be incomprehensible. Correlatively, in Meditation 2 Descartes contrasts 'imperfect and confused' with 'clear and distinct' in the following revealing way: 'an intuition of the mind... may be imperfect and confused... or clear and distinct... according as my attention is more or less directed to the elements which are found in [the object intuited]' (/155). The plural, 'elements', is again mandatory; there would otherwise be no

intelligible contrast. But the complexity of a substance is primarily a complexity of its modal features.

The same moral is to be drawn from each of the texts. Since, if principal attributes were abstractive collectors, the plural forms would be extremely unnatural, the status of these attributes as inclusive collectors is presumptively secured.

Additional textual evidence for the result can be assembled with facility. Throughout the Cartesian *corpus* we encounter passages where Descartes enumerates modal features in a fashion that would be void of probative significance unless the result were correct. Here is a characteristic remark, from Meditation 2. 'But what then am I? A thing which thinks. What is a thing which thinks? It is a thing which doubts, understands, [conceives], affirms, denies, wills, refuses, which also imagines and feels' (/153). With this passage before us, it is also possible to see that the overarching claim quoted from the *Principles* — 'we know a thing or substance so much the better the more properties we observe in it' (1.11/223) — can arguably be construed in the way I explained. The point is not the rather boring one that all things considered it is better to know more about an object than to know less about it. For if, to repeat, modal properties were tagged by reference to the principal attribute, one who 'knows more' in this sense would not have knowledge superior *in kind* about an object than another who 'knows less'. Because both grasp the principal attribute, the knowledge they have is fundamentally the same. The point, rather, is that it is by knowing more that one's most basic kind of knowledge of the object is qualitatively improved. And this requires something like the determinable/determinate pattern to count as a positive analogy of the principal attribute/modal property pattern. And so, at the start of Meditation 3, we find another claim of the expected sort: 'I am a thing that thinks, that is to say, that doubts, affirms, denies, that knows a few things, that is ignorant of many [that loves, that hates], that wills, that desires, that also imagines and perceives' (/157). The 'that is to say' here should be taken quite seriously. If the modal properties of an object were tagged by reference to its principal attribute, the *phrase exacte* would be 'for example', not 'that is to say'. Having cited several representative

passages, I will leave it to the reader to scour the texts for more at his leisure.

While I do not claim that this line of reasoning is clear to Descartes prior to the *Meditations*, there are signs, even earlier on, that his thinking is inclining in its direction. For example, when Descartes speaks in Discourse 2 of 'enumerations so complete and reviews so general that I could be certain of having omitted nothing' (/92), his words can, without excessive strain, be taken to link up with the analysis of certainty provided in preceding chapters. And we can even work back to the *Rules*, though here I think that the links do become excessively tenuous. Consider the following claim: 'if... I wish to prove that the rational soul is not corporeal... it [is] sufficient to include all bodies in certain collections in such a way as to be able to demonstrate that the rational soul has nothing to do with any' (Rule 7/21). And Descartes also speaks, slightly more generally, of 'enumeration... so thorough and accurate that by its means we can clearly and with confidence conclude that we have omitted nothing by mistake' (ibid./20). But though some rudimentary community of thought survives from the *Rules* to the *Meditations*, valuable for determining the dynamic of Descartes' ideological development, there are, as I suggested, reasons for playing down this overlap. First, and less importantly, the enumeration texts in the *Rules*, compatibly with the dominant spirit of the work, have a markedly methodological cast. The need for thoroughness has a commonsensical explanation: to be haphazard is to neglect those systematic procedures which alone can promise firm establishment of results, if results are at all attainable. Second, and more importantly, Descartes' thinking in the *Rules* is obviously informed by a positive, albeit vacillating, attitude towards genus/species structure. A perusal of Rule 6 shows Descartes simultaneously describing 'the universal' as 'more relative' than 'the particular' — which implies that absoluteness increases in the direction of particularity — and describing 'species' as 'relative' when contrasted with 'genus' — which implies, contrariwise, that absoluteness will be found in a universal direction. So it is less the literal content of Descartes' treatment in the *Rules* that bears on the present explanatory project than the palpable volatility

of the work, which attests to the presence of a difficulty in Descartes' own mind about the status of genus/species structure. This said, I will therefore leave the *Rules* behind.

The enumeration texts in the *Discourse* and the *Meditations* support the denial that principal attributes are abstractive collectors. And the frequency of such texts is an index of Descartes' conscious concern to block the identification. The time is ripe, then, to spell out what it might be that Descartes, in denying that principal attributes are abstractive collectors, is denying.

9. *What is a Cartesian real distinction*

On the tentative interpretation of the relation between an item's principal attribute and its modal properties, a substantial distinction works out as a distinction between two totalities of modal properties. In asking whether minds and bodies are substantially distinct, one would therefore be asking: is the modal set to which the mental property F-ity belongs different from the modal set to which the material property G-ity belongs? Two answers are possible. Definitely to establish a substantial distinction would be to verify the accuracy of a picture of the following kind.

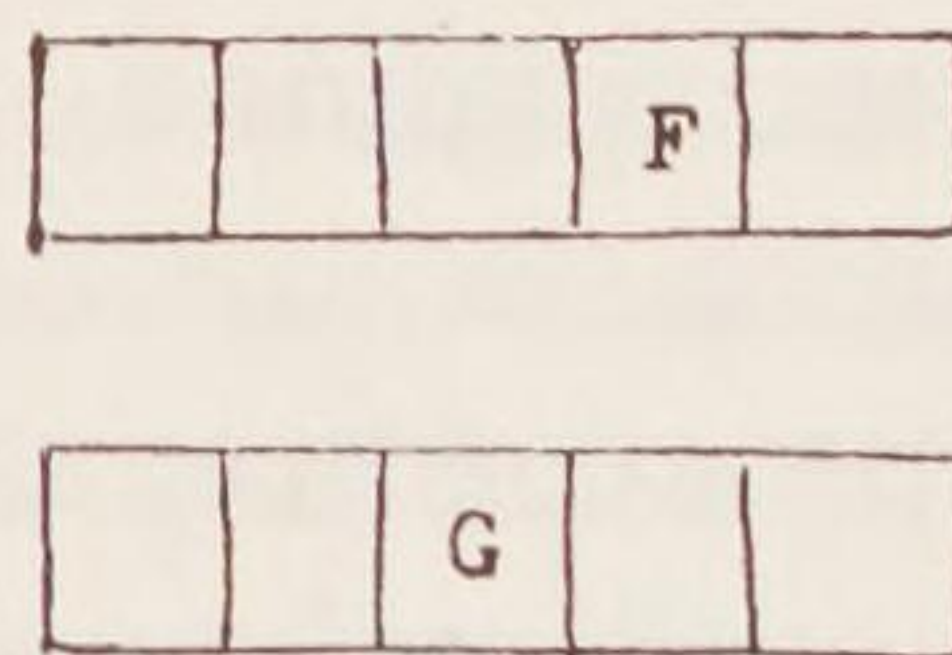


Figure 1

But should it emerge that the following picture portrays the case, the claim of substantial distinctness would fall.

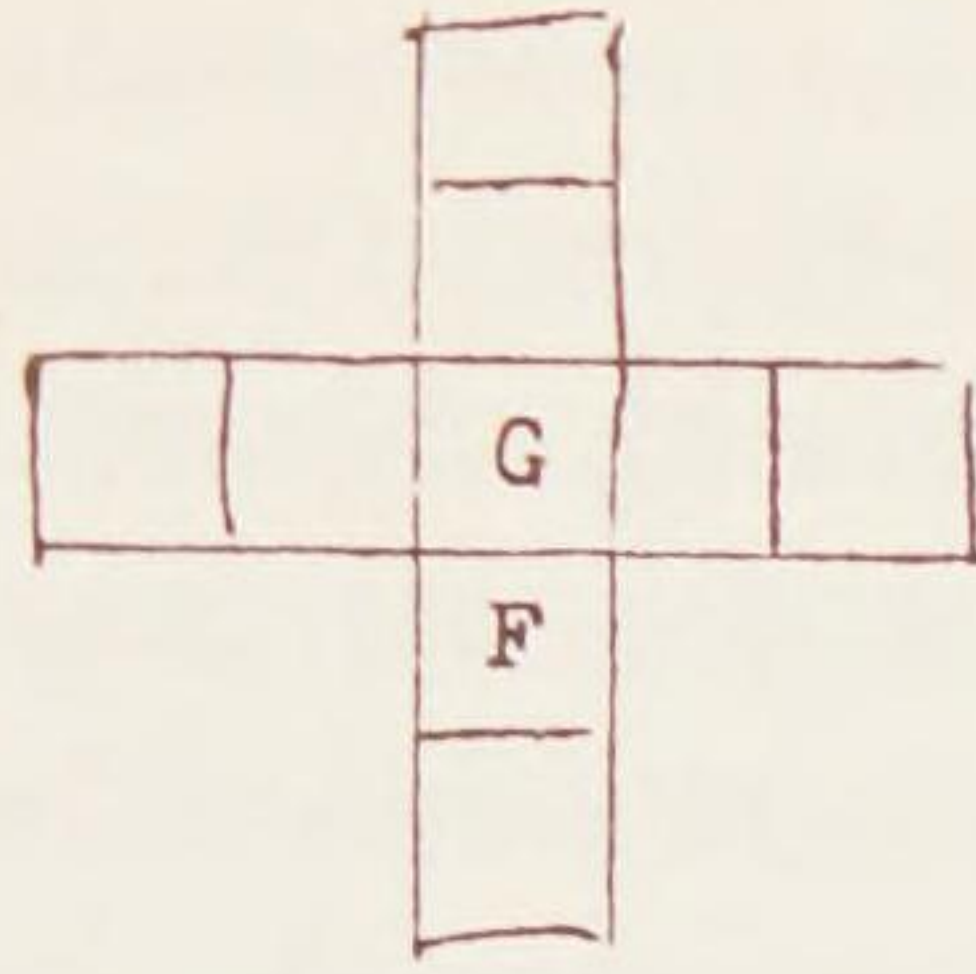


Figure 2

If we assume analogical accord between these figures and the actual character of Descartes' dualist argumentation, the crucial question poses itself: to what kind of distinction might a distinction whose establishment follows the pictured lines be deemed to contrast? An answer is vouchsafed by returning to the rejected alternative, viz. that principal attributes are abstractive collectors. Acutated by Descartes' own pejorative remarks about genera, we may safely treat these as abstractive collectors for purposes of working out the answer in a concrete way.

It is a triviality that generic notions, in collecting their instances, fall short of determining all the characteristics thereof. The shortfall is of two kinds, marked by Descartes' distinction at *Principles* 1.59 between *properties* and *accidents*. (Descartes also distinguishes between *differentiae* and *properties*. The additional distinction is superfluous here.) Let us take 'self-moving being' as the *definiens* of the generic notion of animality. While the generic term's applicability determines that a subsumed individual must have *some* mode of locomotion, it leaves open whether the individual is bipedally locomotive, quadripedally locomotive, or possessed of some entirely different mechanism for spatial translation. Also left entirely open is whether a subsumed individual is hirsute or scaly, oviparous or viviparous, equipped with lungs or gills, etc. Properties are, then, those characteristics — in this case dermatological, reproductive, and respiratory characteristics — from which the genus abstracts entirely.

The reason for these indeterminacies is not in the least mysterious: generic notions are abstractions. And this enables us to see two things without difficulty. First, the members of different genera, even if the respective classes are disjoint, may share a multitude of characteristics.

Second, features which count as accidental *vis-à-vis* one generic content might be property-like *vis-à-vis* another.

Both trivialities conflict with claims Descartes repeatedly makes about attributes and modes. Items falling under different attributes cannot share any modal characteristics: 'not only do we understand that [the mind] exists apart from the body, but also that all the attributes of body may be denied of it' (*Replies* 4/102); 'when I examine the nature of body I find nothing at all in it that savours of thought' (*ibid./ibid.*). By implication, should a pair of items be discovered to share even one modal property, their substantial distinctness would go by the boards: they would be discovered not to have different principal attributes. Also, Descartes states that the modal properties of a substance 'presuppose' the principal attribute: 'all else that may be attributed to body presupposes extension, and is but a mode of this extended thing' (*Principles* 1.53/240).

The figured patterns cater for Descartes' claims. In particular, his thesis about the real distinction between mind and body is catered for by figure 1. A modal totality determines all the characteristics of the items subsumed under it. In terms of the analogy offered: because the range of colour determinates exhausts the content of the determinable, colour, to have established the determinate colour of an item (or to have established its determinate colours, if it is varicoloured) leaves no question unanswered about the item, *qua* coloured. Its character, *qua* coloured, is completely anticipated by the determinable. Similarly, in leaving no status for the principal attribute over and against its component properties — the former being exhausted by the latter much as a chain is exhausted by its links — the figures supply a sense for the term 'presuppose'.

Though the analogy has critical shortcomings, it suggests a contrast which accurately signposts the exact nature of Descartes' thinking here, discharging the obligation by specifying the determinate colour or colours. One who has undertaken to tell us all about an item *qua* coloured thereof, may be asked for further information, e.g. about the item's taste. From the vantage point of the mentioned obligation, the additional information he might supply is wholly incidental to his appointed task. And so, once again,

the character of an item qua coloured is completely specified by the determinable, identified with the totality of its determinates.

There is also a sense in which a generic content fully determines the character of any case of the genus qua case thereof. But it is a far weaker sense. Both the specific features of a case of the genus and its accidental features aren't fully determined by the genus. This underdetermination differs however from the underdetermination of the taste of an item qua subsumed under the determinable, colour. By virtue of having informed us that an item is an animal, a subject is open both to questions about its differential features and to questions about its accidental features. If I have been told that an item is an animal, I obviously am not changing the topic by asking 'What kind of animal?', in the way I would be were I to enquire 'How does it taste?' of an item characterised for me in respect of colour. One shouldn't be misled here by the connotations of unimportance borne by the word 'accident'. To say that Rover's being black is *accidental* to him qua dog is quite different from saying that it is *incidental* to him, as the tartness of an item is incidental to it qua red.

As mentioned, the analogy is imperfect. The preceding point is that a case of the genus animal must possess both specific and accidental features. One who has no quarrel with the distinction between genus and determinable might object that the distinction itself is powerless here. Isn't it equally true that a coloured item — a case of the determinable, colour — must have a taste? It does not suffice in reply to add to the claim that Cartesian principal attributes are determinable-analogues (not genus-analogues) the rider that they are *comprehensive* determinable-analogues — intending by this that just as the determinable, colour, fully determines the character of the items subsumed under it qua coloured, so a principal attribute fully determines the character of the items it collects without any 'qualification'. The reply falls short because it attempts to handle the objection without coming to grips with the analogy's second shortcoming, viz. failure to make out a distinction in kind between principal attributes and abstractive collectors. But as I have granted that the analogy is flawed here, this only means that we are entitled to expect that however the analogy is augmented in order to explain the

kind difference, the addition will also successfully explain why the qualificatory rider 'comprehensive' is not merely *ad hoc*.

Though much is unclear here, one thing merely at least is quite clear. The way genera leave the character of their cases undetermined is an endemic feature of generic description which Descartes denies to hold true for principal attributes. Guided by this firm negative point, we can draw a forward-looking conclusion. Generic universals are *particular-classifiers*; principal attributes, by contrast, are *particular-determiners*. I will shortly move to explain precisely what this means. Imprecisely, it means that while one who operates at the most basic level of world-description with resources of a genus/species kind requires an independent notion of particularity (this will be the notion of a referent: a satisfier of a general content), particularity lacks any such independent status for one whose most basic intensional materials are determinable-like. The difference here can be rendered a bit more precise by recurring to the Aristotelian notion of an accident. Because generic universals are abstractive *vis-à-vis* the particular items they collect — the same is true, obviously, of species concepts — the nature of the collected items is, in principle, unexhausted by the collectors. Cases of such universals will thus have accidental characteristics. (Again, this shows that the distinction between accidents and differential properties is a distinction among features of the same ontological type. A defining feature of a species does not differ fundamentally from a non-defining one.) By contrast, because a determinable, identified with the totality of its determinates, does fully determine the nature of the items it collects, characteristics unanticipated by the determinable will be open to treatment not merely as 'accidental' to the items, but also, more strongly, as 'incidental' to them. This is precisely how Descartes, after having satisfied himself of the truth of dualism, treats putatively material properties of mental items: 'there are so many other things in the mind itself which may contribute of the elucidation of its nature, that those which depend on body ... hardly merit being taken into account' (Meditation 2/157).

10. Aristotle and Plato on the actual and the possible

Alive to the difficulties of satisfactorily interpreting Descartes' texts by construing attributes as abstractive collectors, and possessed therefore of a strong reason for presumptively crediting the analogy between attributes and determinables, let us turn directly to the question of what Descartes, assuming him to be thinking along the lines sketched, is denying. To put it uninformatively, he should be denying an assumption basic to the conception of cognition on which both Arnauld and Gassendi rely in criticising him. It cannot, one supposes, be the sole difference between two philosophical *ensembles* that proponents of the one accept, while champions of the other repudiate, intensional resources of a genus/species kind. Some more basic disagreement will surely underlie a difference here; otherwise, the dispute would be in the nature of a family quarrel. Hinting at an answer to the question of the identity of the dialecticians Descartes alludes to, I mentioned the Stagirite. Keeping an eye on the Cartesian *corpus* all the while, let me now detail the fundamental opposition between an Aristotelian and a distinct — a Platonic — conception of things. This opposition supplies theoretical starch sufficient for stiffening what is tentative in the preceding results.

On a broadly Aristotelian view, to consider a possible or subsistent being is to consider an actual or existential being under a certain assumption, viz. that it differs from any actual with which we are in causal, e.g. sense-perceptual, contact. In more fashionable terms: assuming that some specified thing isn't logically inconsistent, its being an alternative to the actual with which we are in causal contact explains its status as a (mere) possible. The notion of actuality thus wears the trousers. Our understanding of possibilities on a broadly Aristotelian view — how we understand them to be delineated or constituted — is mediated essentially by the content of our prior comprehension of actualities.

By sharp contrast, the notion of possibility takes precedence for Plato: to consider the actual is to consider the possible under a certain assumption. For illustration, think here of how a maximalisation assumption on an aspect of possibles, viz. goodness, singles out one

Leibnizean possible world for actuality. Spinoza, more radical still, takes sheer consistency to underwrite the identification of a possible as an actual. At times, as by Descartes himself, the relevant condition is given a metaphysically non-perspicuous theological form in terms of divine volition: the actual is that possible which God singles out for actualisation.

Once the general lines of contrast are clear, sense can be made of Descartes' declaration that essence and existence 'are in no way distinct' (Letter to *** of 1645 or 1646/188). This does not mean — absurdly — that possibility and actuality are one and the same. Ideas considered 'objectively in the intellect' are 'really distinct' (ibid./ibid.) from their representata. Descartes' meaning is that the increment of actuality over possibility, when an actual is given, makes no independent contribution to determining the actual's character, a metaphysical fact absolutely fundamental to the argument for a substantial distinction between minds and bodies.

The kind of view on which actuality dictates to possibility was available to Descartes, via Aristotle. For Aristotle, matter is *ex hypothesi* bereft of a formal cause or essence. In this way the Aristotelian notion of material cause prefigures the notion of a first-level instance conceived as irreducible to features instanced. By contrast, no metaphysically valid component of reality could conceivably be essence-less for Descartes. More Platonic even than Plato here — Plato acknowledges a Receptacle fundamentally alien to the basic subsistent realities, Forms or Ideas, in accounting for the facts of first-level particularity — Descartes elevates matter to the status of an essence.

The crucial point can now be extracted. For Aristotle, intensions, the contents of thinking, are interrelatable along genus/species lines. In the florid language of the *Metaphysics*: a differentia actualises a genus conceived on analogy with the material substratum of a concrete particular. When all is said and done, this kind of talk only makes sense in the context of a metaphysics which subordinates the possible to the actual. Largely because of Aristotle's losing battle to slough off a Platonic heritage, there is a difference which he himself would regard as important between saying that a generic notion is

abstracted from particulars, i.e. instances of the genus's species, and saying that the species results from actualising a generic potency. But the two sayings are systematically interrelated. The *structural content* of the claim that the genus is akin to matter *vis-à-vis* the differentia qua form is identical to that of the claim that the genus is more abstract than the species relative to particular instances of the species (a claim which, we saw, Descartes himself makes in the *Rules*: 'the universal ... can be held to be more relative than [the particular], because it depends upon individuals for its existence' (Rule 6/16)). So the structure of possibility is at base a shadow of the structure of actuality, since everything is ultimately anchored in *instances* of the intensional contents in terms of which thought packages its accusatives.

Aristotle's *attack* on Plato can only be understood in this spirit. According to Aristotle, Plato's assignment of objectivity (subsistential reality) to the relations among Forms qua articulable along genus/species lines makes no sense unless the concrete particular — the first-level individual instance — is taken as substance. What could possibly justify the claim that Forms are interrelated in genus/species fashion if their interrelations were not drawn by abstraction from the content of a prior recognition of similarities holding between actual or existing particulars, i.e. instances of the Forms?

However, while the charge that genus/species structure is intelligible only relative to the individual instance is correct, Aristotle is mistaken in urging it against Plato. Plato *denies* the applicability of such structure to the interrelations among Forms. 'The schemata of diaphysis for Plato ... do not *portray* the relational arrangements of the world of Ideas but rather are [mere] instruments of analysis'.⁷ The fact of the matter (and note the Cartesian echo) is this. 'The relation of ideas to one another is that of implication or compatibility and its opposite'. And again: 'necessary implications of absolute essences'. So the priority of the possible over the actual makes a substantive difference. The way that general notions are (really) interrelated in

7. H. Cherniss, *Aristotle's Criticism of Plato and the Academy* (New York: Russell & Russell, 1962), p. 46. Next two quotations: *ibid.*, *ibid.*; *ibid.*, p. 60.

the realm of particular instances (as opposed to how they may seem to be interrelated) is not determined in Platonic metaphysics by the character of these instances. Pretty well the reverse is true. At any rate, the relations among general things are objectively fixed prior to any essential consideration of instances.

The distinction between an Aristotelian and a Platonic view of the relations between thought and reality has been sketched independently of Descartes' texts. While I showed in one instance (and will show below in others) that aligning Descartes with Plato helps to illuminate otherwise intractable Cartesian claims, shouldn't direct confirmation of the alignment be provided? Given the dearth of serious historical discussion in the Cartesian works we are examining,⁸ satisfying this request would necessitate an excursus through the late medieval and early modern literature that is beyond my interpretative purview, not to mention competence. Descartes does however make at least one backward-looking remark which bears out the alignment, and which also at the same time hints of a reason why he might have thought an explicit and detailed tracing of his lineage back to Attica to be unnecessary.

In *Replies* 4, Descartes seems to connect his position with Aristotle's. The way he does this suggests that he was under attack from Aristotelians who, reading his texts in their own terms, could understand neither his practice nor his results. What Descartes' response shows is that he himself understands Aristotelianism as a variant of Platonism, rather than as the anti-Platonic doctrine I have outlined. And obviously, if Descartes failed sharply to distinguish the two positions, he would not have felt any pressure directly to treat the contrast. Here, then, is the remark I alluded to:

in taking the entire essence of a thing as its formal cause..., I merely follow in the footsteps of Aristotle [A]fter passing over the material cause, he names as *aitia* primarily *to ti en einai*, or, as it is rendered in philosophical Latin, *the formal cause* (/112).

Though it is perhaps not a totally unfair misrepresentation to say that

8. 'In twenty years, [Descartes] said, he did not open a scholastic textbook'. Kenny, *Descartes: A Study of His Philosophy*, p. 6.

Aristotle takes 'the entire essence' to be the formal cause, it is a misrepresentation nonetheless. Aristotle, by contrast with Plato, cannot ignore something outside the formal cause — viz. the material cause.⁹ This, as I have explained, literally makes a world of difference.

The contrast between an Aristotelian and a Platonic conception of the relations between existential and subsistential illuminates a series of characteristic Cartesian texts, and by doing so confirms its own accuracy as a tool of interpretation. According to Descartes 'we judge that all things stand to each other in respect to their actual relations in the same way as they are related in our consciousness' (*Replies* 4/101). This, unless read in a Platonic spirit, is the sheerest dogmatism: metaphysical impudence. Otherwise, what right has Descartes to be so confident that subsistential relations (relations 'in consciousness') aren't mediated by a principle — for Aristotle the material cause — metaphysically alien to the constituents of the subsistential realm? How can he be sure that 'if [an extended particular] does exist, any one portion of it which we can demarcate in our thought must be distinct from every other part' (*Principles* 1.60/244)? Were the extended world 'outside' of God in the sense that the Aristotelian material cause is outside the Forms, then the citation of divine omnipotence in respect of the actualisation of the distinction cogitatively made would in principle outstrip the content of divine omniscience. Were there a real increment here, then human subjects, even if they were *per impossibile* to be supplied with the 'clear and distinct' content of divine consciousness, would still be unjustified in inferring to 'the truth of outside matters'.

Descartes does appeal to divine omnipotence in the *Meditations*, e.g. at Meditation 6/190. But he never does so in order to validate a claim about 'outside matters' which doesn't already have 'clear and distinct' status. Nor, for the decisive reason just adumbrated, could the appeal serve such a purpose. Descartes is careful to indicate this

9. 'In [Plato's] sensibles ... there is nothing to correspond to Aristotle's material substrate, and that in Plato's system with which [Aristotle] identifies this substrate [viz. the Receptacle] is expressly excluded from the ideas as they are from it'. Cherniss, *Aristotle's Criticism of Plato and the Academy*, p. 173.

later on: 'our knowledge of the real distinctness of two things is unaffected by any question as to the power that disunites them' (*Arguments Drawn up in Geometrical Fashion*/ 59).

Why then does Descartes see fit to appeal to omnipotence? It isn't much of an explanation that 'there was nothing else for me to use' (*ibid./ibid.*), since the appeal's power to dislodge the reader from the inertia gripping him due to the pervasiveness of the facts of substantial union is dramatic, not probative. I can think of only one further passable explanation for the appeal. Descartes might easily have been moved to call upon divine omnipotence because of a failure sharply to distinguish the inadequate conceptions of mind and of body with which all of us are initially lumbered — as Descartes himself notes, his readers 'have never had experience of separation from the body' (*Replies* 2/33) — and the adequate conceptions meditatively vouchsafed. Now the inadequate conceptions are 'unclear and indistinct' in the technical sense. So in the pre-meditative arena no real distinctness is recognised between the denotata of 'mind' and 'body'. Consequently, divine omniscience, which concerns the 'clear and distinct', cannot be cited here. But if this is what moves Descartes to turn to divine omnipotence, he certainly should have mastered the urge. For supposing that God is able to separate mind, qua inadequately conceived, from body, qua conceived in this way, then not only would 'clear and distinct' conceptions of each be unnecessary to establish their real distinctness, but, far worse, such conceptions would fail entirely to count in favour of dualism.

11. Descartes' anti-Aristotelianism

Subject to the reservations sketched at the start of the chapter and soon to be exposed in detail, Descartes' words now 'fall into place'. Not that Descartes' position is seen to be defensible. Rather, its character is clarified and its real flaws revealed. Modulating slowly towards criticism, let me set down a few positive facts.

First, the notion of a (first-level) instance counts as metaphysically irreducible for the Aristotelian, i.e. he who employs intensional

resources whose interrelations are articulable in genus/species fashion. Intensional structure of this kind does not make sense except on the assumption of irreducibility. Given the link between the notion of an instance and the idea of reference — as explained, Quine's analysis of reference appeals to the bound variable of quantification — it follows that theorists who tread an Aristotelian line will treat reference, or some functional counterpart thereof, as basic to world-cognition. It is thus explained why accidental properties are basic to Aristotle. Be the distinctions between accidental and essential properties as may be, both are instantiated in the same sense. By contrast, because, for the Platonist, the nature of reality, so far as basic metaphysics goes, is fully determined by subsistential contents of thought, the notion of a referent or instance, and hence the notion of a referential relation between the cogniser and the world, have no fundamental role to play. Where basic metaphysical determination is in question, accidents therefore count as 'incidental' for the Platonist.

Second, I noted that Descartes' formulations of the argumentation for dualism see-saw between a use of 'substance' as a kind term and as a term for particular cases or instances of kinds. Reconsider this exemplary passage: 'all else that may be attributed to body presupposes extension, and is but a mode of this extended thing' (*Principles* 1.53/240). A shift occurs in mid-sentence from a use of 'body' with the meaning 'body, generally' to a use with the meaning 'this particular body'. The shift does not testify to confusion, and need occasion no textual reconstruction. Because the particularity of a particular body makes no difference to its character qua body, the move is natural for Descartes.

The reconstructive approach to Cartesian dualism in the bulk of 'analytic' literature is plainly Aristotelian in character.¹⁰ The various attempts to assess the case, critical and defensive alike, are therefore doomed to missing the point, since that which is purveyed as the

10. 'Aristotelian' in the sense I have explained, not in the sense implicit in Descartes' comment quoted from *Replies* 4.

Cartesian real distinction by one who operates in Aristotelian terms is bound to be an impostor.

A commentator who fails to recognise the Platonic provenance of Cartesian metaphysics can be expected to force what *he* regards as order onto the offending texts when he encounters the mentioned shift, i.e. to eliminate one of the divergent uses of 'substance' in favour of the other. Here are two representative examples. According to M. Hooker, in whose eyes 'Cartesian essentialism ... look[s] like what we can label "Aristotelian essentialism"', 'for [Descartes] not everything shares the same essence, but still many things do Descartes is interested in those properties in virtue of which a thing is the kind of thing it is'.¹¹ J. Bennett: 'What [Descartes] is really saying is that minds and bodies are of radically different *kinds*'.¹²

Concurring that Cartesian essences are general as opposed to particular, the authors concur as one that Descartes' dualist reasoning concerns kinds. But though what *they* require in the way of uniformity is thus restored, Descartes' argument has been inverted. From a broadly Aristotelian point of view, talk of a 'kind of thing' is talk of a class of particulars whose members are grouped together because of a similarity in form. And the form here is therefore, as Gassendi notes, abstractive in characters. On Descartes' own admission, no ontological result of his type could be based on or boil down to a distinction of kinds.

Had these authors recognised that the sense in which modal properties of (Cartesian) substances 'presuppose' the principal attribute resists Aristotelian explanation, they would have been compelled to react differently. An Aristotelian collector leaves undetermined many — indeed most — of the features of the items it collects. To echo Descartes' own remark in the *Principles*: a genus leaves undetermined both the properties and the accidents of its members; a species leaves the accidents undetermined. But both properties and accidents are features of the collected particulars which are hardly incidental to them, in Descartes' dominant sense of

11. 'Descartes' Argument for the Claim that His Essence is to Think', *Grazer Philosophische Studien*, 1 (1979), p. 149.

12. *Kant's Dialectic* (London: Cambridge University Press, 1974), p. 43.

'incidental', a sense which would come to expression in his claiming that undetermined features do not 'presuppose' the principal attribute. For an Aristotelian, 'accident' doesn't mean 'characteristic which only seems to attach to a particular but which doesn't really attach to it'; it means 'characteristic which is unanticipated by the chosen collector'. (Aristotle's distinction between accidental and non-accidental properties isn't the distinction between Appearance and Reality.) As this makes sufficiently plain, the distinction between accidents and properties is induced by the selectivity which goes into framing the generic notion.

How would one who recognises these last facts react? According to Bracken, 'Cartesian material substance is not an individual ... existent',¹³ i.e. not a particular. This is vastly stronger than the point that Descartes argues on the level of kinds. For even if he does argue on that level, the items which comprise the kinds are particular substances. Bracken makes his claim because he is aware of the special features of the Cartesian attribute/mode link: 'the relations between substance and modes are explicated by ... appeal to the deductive model'; 'the suggestion is that the relation between the individual [sc. the particular] and its properties is left far behind in the attempt fully to appreciate that they are deductive relations, discerned by the pure understanding, that hold between [the principal attribute] extension and its myriad modes'.¹⁴

For all that is right here, the result, in this form, is surely intolerable. Bracken makes it appear that what Descartes says has no bearing whatever on particulars. But my body is a particular; so is my mind. If the proof that mind and body are distinct has no bearing on my mind and my body, what profiteth us Cartesian dualism? While getting half the point right, the commentator is prevented from doing

13. H.M. Bracken, 'Some Problems of Substance among the Cartesians', *American Philosophical Quarterly*, 1 (1964), p. 132. Quotations following: *ibid.*

14. For reasons to be advanced in the following section, the word 'deduction' is too strong. A preferable word is 'transformation', deductive relations being just one form of transformational relations. Consider Descartes' claim that 'this piece of wax being round is capable of *becoming* square and of *passing from* a square to a triangular figure' (Meditation 2/154-5: emphasis added).

justice to the whole position because he misses the second half, viz. the manner in which what Descartes says bears on particulars. In passages like the one quoted from the *Principles*, the shift testifies that Descartes does see a relation.

It is true, and bears remark, that neither can the modal properties exemplified by *particular* bodies and minds be determined deductively, nor can they be determined by invoking whatever the mechanism — I have given it the generic name ‘transformation’ — which unites modal properties into a modal totality. That a particular body has such-and-such a shape cannot be explained solely by means of the fact that a state of this kind is included in the body’s principal attribute. An explanation here has got to make appeal to the causal relations between the body and other particulars.

Descartes is quite aware of the fact. Take the wax-experiment. ‘This piece of wax’ is ‘hard, cold, easily handled, and if you strike it with the finger, it will emit a sound’ (Meditation 2/154). Its being hard rather than soft, cold as opposed to warm, is a function of how it is impinged upon by other particulars: ‘a piece of wax owes its shapes partly to the pressure of other bodies, partly to its own earlier shape or other qualities such as heaviness or softness, and partly also to its own movement’ (Letter to [Mesland] of 2 May 1644/148). In this sense, a particular round piece of wax might not be ‘capable of becoming square’ (Meditation 2/154-5): under the circumstances it might be causally impossible for it to assume the square shape. The wax-experiment, qua about ‘wax in general’ (ibid./155), establishes the upper range of possible modal mutation for particular extended beings. Once we recognise that the experiment couldn’t conceivably establish such a thing if the particularity of beings of this type made an essential difference as it does for Aristotle, since ‘accidents’ of particulars are strictly undetermined by his ‘formal cause’, we can also appreciate that establishing the result *is* establishing something relevant to particulars.

Though a great deal of what Descartes says remains enigmatic, he doesn’t ignore the relations between the particular and its qualities. An important lesson can nevertheless be learned from Bracken’s error of interpretation. It indicates that our own understanding of

particularity (*eo ipso* of the relations between particulars and their properties) may bear no intelligible links with the content of the Cartesian scientist's understanding. If, rather than saying that Descartes' discussion leaves the particular and its relations with property far behind, Bracken had said that his discussion outpaces our own conception of these matters by a wide margin, I wouldn't have found fault. Once the difference here is clearly displayed, we can pinpoint an extremely acute problem for Descartes; again a version of the problem of referring the probable to the certain.

It was stressed at III.9 that Descartes executes the wax-experiment in order to distinguish our mundane conception of body from the adequate conception: to gesture in the direction of what an adequate conception of body would be like. As explained, it doesn't suffice for Descartes to show, by way of establishing dualism, that we are distinct from body qua inadequately conceived. But suppose for the sake of argument that dualism is correct in reference to conceptions of mind and body which are adequate. How will this move the commonsense thinker? He would obviously be moved if dualism bore directly on his commonsense understanding of body, for it is in terms of that conception that he understands the denial of dualism. But it is now apparent that the truth of dualism is compatible with the *non-distinctness* of mind and body as normally conceived.

The problem is plain. The inadequate conception of the world which Descartes repudiates — hence as a special case the inadequate conception of the nature of and relations between mind and body — has now been roughly and readily identified with an Aristotelian conception. As far as the conception in general is concerned, the selectivity involved in framing an Aristotelian abstractive collector makes perfect sense in the context of the ' $R = V(o)$ ' schema. As for the special case, no-one needs to be told that Aristotle's philosophy of mind is wholly antagonistic to Descartes'. But Descartes is committed to agreeing that the first conception of the world is autonomous of the second. Its autonomy follows from the fact that on official Cartesian principles the probable is not immanently referrable to the certain. Now what is commonsense anti-dualism? It is the thesis that minds and bodies, as inadequately conceived in the lights of the

Cartesian metaphysician, are not sharply distinguishable. For all that Descartes proves — for all that he can or indeed should wish to prove — this may be completely true. I said above that both Arnauld and Gassendi, who operate in broadly Aristotelian terms, miss Descartes' point. From this it cannot be inferred that their critical contentions are null and void. In order for Descartes to secure his result, it does not suffice that he indicate that these critics misconceive the structure of his reasoning for dualism. (Cp.: Aristotelian categories \neq Platonic categories.) Nor — as we can now see quite clearly — is it enough for him to make out that his reasoning here does have a coherent structure. (Cp.: there is such a thing as a Platonic categorisation of reality.) He must also show how the inadequate conceptions which Arnauld and Gassendi sponsor are themselves explained by Cartesian metaphysics. (Cp.: Aristotelian categories can be mapped onto Platonic categories but not *vice versa*.) This, it appears, is something he cannot show.

Having identified the difficulty, and with the promise that I will address it again in the next chapter, let me return to the main line of discussion.

The 'dialecticians' are identified. They are Aristotelians. (Historically, they are scholastic exponents of an Aristotelian, and hence opponents of a Platonic, line.) The structure of the relations between the intensional contents of thought is a function, for such thinkers, of particularity. So they are incapable of arguing in a metaphysically non-circular way to truths about particulars from the relations between these contents, as Descartes, e.g. in the passage cited above concerning the divisibility of extension 'in consciousness', claims one who possesses 'ideas' can argue.

Consider Descartes' pejorative remark in Rule 2 concerning 'those weapons of the schoolmen, probable syllogisms' (/4), which comes hard on the heels of the observation that 'we cannot attain to a perfect knowledge in any ... case of probable opinion' (/3). At first blush, it would not be implausible to gloss 'probable syllogism' as 'syllogism whose component propositions link terms "F", "G", and "H", some of which express accidental determinations'. But though Descartes' own attitude towards Aristotelian categories is not

completely unfriendly in the *Rules*, this reading seems, on reflection, overly committing: it represents Descartes as acceding to the scientific respectability of syllogisms free of accidental determinations. Without insisting on it, I suggest that the forward drift of Cartesian thinking is better gauged by a different gloss, in accordance with which the objection is levelled against traditional syllogistic reasoning because of the very structure of its propositional components. Even those syllogisms which would be called 'demonstrative' by an Aristotelian count as 'probable' for Descartes. Since the terms used — 'F', 'G', 'H', etc. — are predicates, each syllogistic component, even 'All men are rational', is structurally 'imperfect', and hence falls short of 'certainty'. Terms like these, and hence propositional components containing them, belong to a 'probable' mode of cognition: they express Gassendian universals.

12. *Two kinds of abstraction*

Returning to the mereological account of ideational incompleteness, we can conclude the description of Descartes' positive position and move to criticism.

When the issue of distinguishing ideational from non-ideational incompleteness was first aired, the attendant intricacies were so considerable as, I suspect, to have imparted an appearance of artificiality to the discussion. These intricacies can now be seen to be mere corollaries of Descartes' Platonic categories. Consider a principal attribute — the basic Cartesian expression of substance — conceived along the lines of figure 1 as a totality of modal elements. Each of the components of the totality relates mereologically to a wider whole. Similarly, if we take two modal totalities together (this being the Cartesian idea of a substantial composite), then each totality is mereologically related to the union. According to Descartes adequate cognition is cognition which encompasses the whole without residue: 'if any knowledge is to be *adequate*, it must embrace all the properties which exist in the known thing' (*Replies* 4/97). It is thereby explained why a subject who adequately cognises an element

cognises it as an element of the whole: 'a mode ... can by no means be comprehended, except it involve in its own concept the concept of the thing of which it is a mode' (*Notes Against a Programme*/440).

I have just now introduced both the special and the general notions of ideational incompleteness. The special notion is exemplified in cases of substantial union, where one substance is embedded in a substantial composite; the general notion in cases where a modal property is embedded in a wider, substantial, whole. We will shortly see why Descartes runs into trouble because of his failure to observe the special notion's priority; and we shall also see that his validation of (human) reason as a 'principle' of sufficient power to enable its possessor to achieve knowledge requires this non-observance: — a dilemma.

What of non-ideational incompleteness? An item is non-ideationally incomplete if it isn't related mereologically to an ideatum. This now is also easily understood. In a clear sense a genus gives a partial characterisation of a case thereof. But since the generic content is in the first place bound up with the ' $R = V(o)$ ' schema, the contents here are *ab initio* non-ideational in nature.

I mentioned in closing section 4 that for purposes of accurately interpreting Descartes' position a distinction is needed between different types of abstraction. It is now possible to see with relative facility that there are indeed, and in principle, two distinct notions of abstraction in the Cartesian texts. One is the particular-based notion of abstraction — I shall call it 'sensible abstraction' — whose products are the Aristotelian intensions listed at *Principles* 1.59. The other is a notion of abstraction, styled by Descartes 'intellectual abstraction', which isn't particular-based. It is the kind of abstraction effected when a thinker attends to part of a modal totality to the exclusion of the rest. Whereas the abstractness of a sensible abstraction is relative to the concreteness of particular exemplifiers of the abstract content, that of an intellectual abstraction is relative to the concreteness of a wider ideational whole.

As part and parcel of his unclarity concerning the nature of the reference of the probable to the certain, Descartes often smudges the line between sensible and intellectual abstraction. Consider how the

words chosen by him to describe the process of sensible abstraction are at times identical to those used in detailing the other abstractive process. At *Principles* 1.59, Descartes writes: 'when we see two stones, and without thinking further of their nature than to remark that there are two, we form in ourselves the idea of a certain number which we term the number of two' (/243). In appreciably the same terms, he offers the following explanation to Gibieuf: 'Intellectual abstraction ... consist[s] in my turning my thought away from one part of the contents of [a] richer idea the better to apply it to another part with greater attention' (Letter of 19 January 1642/43). The reader who is not on the *qui vive* here could easily fail to recognise a difference. But a sharp difference won't escape one who is properly alert. The phrase 'mental abstraction', which Descartes interchanges with 'intellectual abstraction', indicates that the objects with reference to which such abstraction is executed are not particulars; they are ideational contents. Thus, elsewhere in the same Letter, Descartes informs us that 'to tell whether my idea has been made incomplete or inadequate by the abstraction of my mind, I merely look to see whether I have derived it, not from some more complete object outside myself, but by abstraction from some more rich or more complete idea which I have in myself' (ibid./ibid.). 'Look to see'? Surely not in the literal sense of the verb. By contrast, the 'seen stones' in the *Principles* are standard particulars visually experienced.

Firmly to fix our understanding of the contrast and of its significance, let us examine a few ordinary concepts. The concept *red* might be acquired by a subject as a result of his noting a resemblance-in-colour between a number of objects visually encountered, e.g. poppies, stoplights, etc., and the concept *rectangle* introduced into his repertoire by reference to a similarity-in-shape holding between table tops, window frames, and so on.¹⁵ A subject who acquires the mentioned concepts in these standard ways would agree that colour

15. Like Descartes, I am framing the point in genetic style. It can be reframed so as to bear on the logical character of the mentioned notions: however the concept *red* is acquired, acquired is the concept of a property of objects such as poppies, stoplights, etc. See the second paragraph of section 4 above.

and the shape are essentially properties of richer objects, e.g. poppies which are of that colour and table tops having that shape. This agreement explains what Descartes would mean by saying that the ideas of colour and of shape here are abstract in the second way spoken of in the Letter; abstract *vis-à-vis* 'some more complete object outside'; abstract, in other words, *vis-à-vis* particular satisfiers of the predicates 'red' and 'rectangular'.

Plainly, the aetiology of the concepts *red* and *rectangle* links up with the 'R = V(o)' schema, and the link justifies describing the operative mode of abstraction as 'sensible'. In cases of the kind presented, the 'richer or more complete objects' from which the concepts are abstracted are particulars external to the subject, which are cognised by him, when they are directly cognised, essentially in a sense-perceptual manner. These facts make clear that Descartes is obliged to withhold ideational status from notions which are abstract in this fashion. And so, when he talks of an 'idea' of number at *Principles* 1.59, he is using the term as synonymous with the generic 'representation'. Of course, Descartes denies that colour, properly conceived, is a mode of extension. He does not deny that shape is a mode of extension. Evidently, for reasons we need not review, the mechanisms of sensible abstraction are metaphysically illicit, and the type of cognition in the context of which these mechanisms function metaphysically inadequate. In the pair of examples used, we find just that kind of distortive comparison and contrast which Descartes marks down in the *Rules* to an 'artistic' brand of cognition, and which he explains in terms of 'passivity'.

I will curtail the search for further textual confirmation of the distinction between sensible and intellectual abstraction. Because Descartes himself smudges the line between the two — more testimony of his unclarity about the relations between the probable and the certain — the difficulties shortly to be aired better serve the aims of confirmation than the telegraphic recitation of inconclusive passages. But let me end with a terminological proposal which, odd as it may seem to the contemporary reader, will be shown in the sequel to have historical legitimacy.

Sensible abstractions are properly denominated 'concepts'.

Intellectual abstractions should be called ‘incomplete ideas’, with ‘incomplete’ understood in its non-technical sense. Sensible abstractions, or concepts, are abstract relative to particulars. In linguistic terminology, they correspond to predicates, and so, structurally, they express contents which are satisfiable-by-particular-instances. (There may of course be higher-order concepts. But the overall structure of concepts is anchored in first-level concepts, which express properties of particulars.) In the fashion indicated in the section preceding, the relation between intellectual notions and particulars is ‘mysterious’. To mark the contrast, the key point, again, is that the abstractness of an (abstract) intellectual content is relative not to particulars — that would undermine the difference, making of intellectual abstractions Aristotelian intensions — but to wider ideational wholes, i.e. principal attributes, which alone are ideationally concrete.

13. Descartes’ real problem: confirming the categories

We now proceed to the difficulties facing Descartes. In the process a question which may have been raised as early as the first chapter will be answered. There I took up Descartes’ criticism of sense-involving cognition. But the senses constitute only one of the ‘principles’ (Meditation 1/145) Descartes considers, reason being the other. The reader may have wondered whether my treatment ignores the latter. What I shall now show, among other things, is that Descartes’ problem of validating reason collapses back into his problem of superseding the senses. It isn’t as if having proved that the senses can’t supply certain knowledge, Descartes goes on to ask an entirely different question: is reason equal to the task? Though Descartes formulates his account in this way, I shall show that he cannot justifiably claim to have established that reason is part of mode of world-cognition different from the sense-based mode.

Given the identification of principal attributes with modal totalities, figure 1 is only a monogram of the definitive Cartesian proof of the ontological distinctness of mind and body. To prove that

minds and bodies are really distinct, Descartes must determine that *none* of the component elements of the principal attribute mentality also belongs to the principal attribute extension. *Pace* figure 1, there are more than five of each. The problem really facing Descartes is portrayed properly in the following figure.

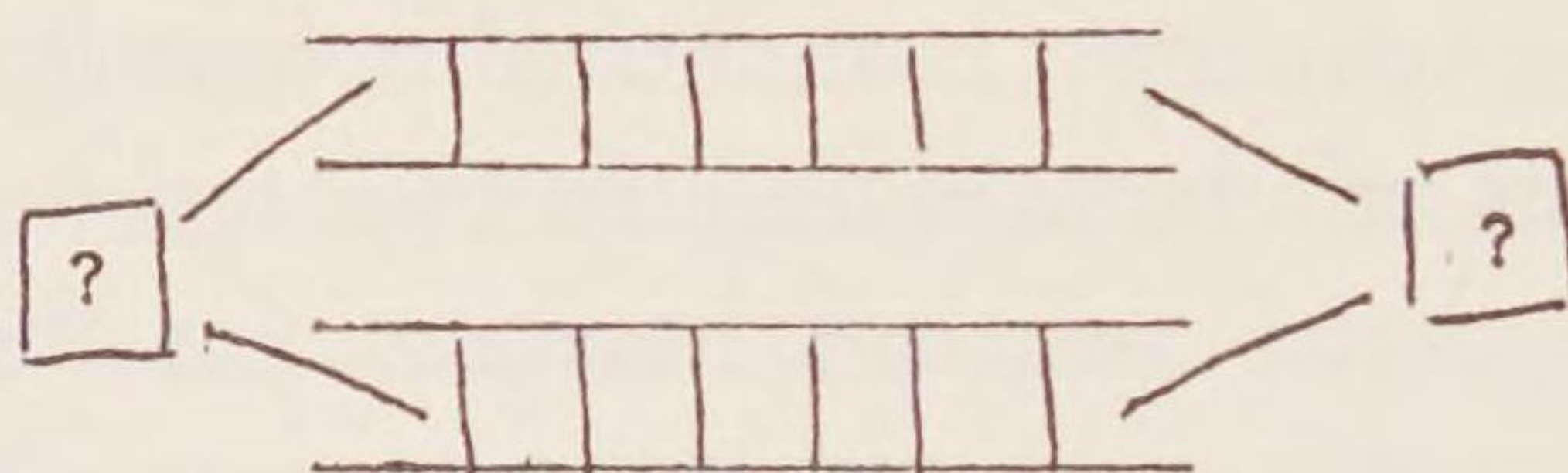


Figure 3

The important difference between figure 1 and figure 3 can be enlarged upon by introducing God, whose knowledge is paradigmatically 'certain'. From the divine standpoint figure 3 collapses into (an extended version of) figure 1. (Of course, if dualism is incorrect, figure 3 collapses into (an extended version of) figure 2.) The modal totalities are grasped by God in their entirety and are 'seen' (sc. 'intuited') to be reciprocally exclusive. God could therefore express dualism by saying that the principal attribute, extension, differs from the principal attribute, mentality. But man, a finite cogniser, can state this only as a short form.

The defect in the human case is recognised by Descartes, and is represented as *a defect of reason*: a shortfall of human from divine reason. Thus, describing the project of intellectual renovation in *The Search After Truth*, Descartes asserts that each of us must at the very least 'remove ... all the inexact ideas' which he initially possesses 'and seriously begin to form new ones, applying thereto all the strength of his intelligence with such zeal that if he does not bring them [sc. the ideas] to perfection, the fault will not at least be laid on the weakness of the senses' (/312). To handle the defect Descartes introduces a number of subsidiary distinctions, e.g. between 'adequacy' and 'completeness', and between 'comprehension' and 'apprehension'. By appealing to these he attempts so show that the problem illustrated by figure 3 can be resolved; attempts, that is, to show that the defect's

reality does not foreclose on the very possibility of knowledge for beings such as we.

A distinction has to be made here in Descartes' name. Even one who grants the Cartesian conception of certain knowledge — one who therefore understands and does not dispute the intelligibility of its distinctive categorial base — can raise the question about the truth of dualism illustrated by figure 3. A presumptive doubt here is articulable thus: in extending our grasp of the principal attribute, will we come upon a shared (modal) property? In the literature to which I am reacting, this is systematically misunderstood. Kenny asks: 'May there not be some ... relationship, unsuspected by Descartes, that will link his idea of thinking substance to that of extended body?'¹⁶ Addressing this very question, B. Williams responds: 'The objection seems ... just to come down to saying that Descartes may be wrong, which is less than compelling'.¹⁷ But both commentators, due to their common failure to recognise Descartes' distinctive categorial base, are contesting the wrong issue, Kenny critically, Williams defensively. Both have in mind the possibility that a satisfier of a mental property might also (turn out to) be a satisfier of a material property. Descartes' reasoning does not however take a form against which such an eventuality has any force. Had Descartes asked and tried to answer the posed question, he would not have been Descartes. He would have been Arnauld, or Gassendi. He tells us that their questions are not his.

The distinction here is, then, between the real way Descartes' argument might fail, and the way it is usually represented as possibly failing. This is the difference between anti-dualism as concerns a 'certain' conception of things and anti-dualism as concerns a different, 'probable', conception. For Descartes to have taken seriously the kind of failure which Kenny and Williams are debating, he would have had to be uniformly 'probabilistic' in his conception of cognition, in which event the issue would already have been settled.

16. *Descartes: A Study of His Philosophy*, p. 95.

17. *Descartes: The Project of Pure Enquiry* (Harmondsworth, Middlesex, England: Penguin, 1978), p. 114.

With a friend like Williams, to adapt the old saying, Descartes does not need enemies.

The point bears emphasis because it makes clear that Descartes' problem about dualism is conceived *by him* as a problem specifically about reason. When introducing the subsidiary distinctions, he assumes that he has effectively left the first 'principle', the senses, behind. And I propose to refute his entitlement to the assumption. The manner in which Descartes formulates his account notwithstanding, he has effectively outdistanced neither the despised Aristotelian intensions nor the associated ' $R = V(o)$ ' schema.

What is the defect of reason? It is bound up with the contrast between 'intuition' and 'demonstration' or 'deduction'. The human cogniser, because of his finitude, cannot accomplish intellectually what God does in fact, viz. '*bring forth the whole*' (*Objections* 1/3) in a single act. Human reason operates serially, '*in a series of acts*' (*ibid./ibid.*). These are the words of a Cartesian critic. But they echo a perfectly Cartesian thought, expressed on numerous occasions. God 'understands... — not indeed as we do, by operations which are in some way distinct from one another, but ever by one identical and very simple action' (*Principles* 1.23/228); 'it is of the nature of finite understanding not to embrace all things' (1.36/233); 'it is an infallible token of imperfection in my knowledge that it increases little by little' (*Meditation* 3/167). What God grasps 'intuitively' the finite spirit is incapable of so grasping. Consequently, the proper figure to illustrate the (human, meditative) problem of establishing dualism is figure 3, not figure 1.

For Descartes to have said that the defect of human reason — the need for human subjects even in respect of 'certain' cognition to understand serially — is specifically *a defect of reason*, is for him to have implied a contrast between this defect and some other human handicap with which it might otherwise have been confused. This last is, of course, the defect of the senses. From the point of view of what genuine knowledge is, the second defect is a far more serious matter than the first. A sense-based grasp of reality is 'fragmentary', 'incomplete', 'partial', and so on, where each of these terms has its technical meaning. The seeker after scientific knowledge must

therefore offset the influence of the senses, rather than work at their refinement or improvement, if his search is to stand a chance of success.

In principle, the contrast between the two defects is quite clear. Though one who does not cognise an object 'in one act', but 'in a series of acts', also cognises the object in what might aptly be called a fragmentary or partial way, *this* fragmentariness or partiality is of Descartes' non-technical sort. Both in the case of the defect of the senses and in the case of reason's defect one can characterise the cognitive partiality or fragmentariness with the help of the word 'abstraction'. But the word has different meanings in each case. The kind of abstractness affecting partial ideas is *intellectual* in nature; by contrast, the abstractness of sense-perceptual representations is *sensible*. And so, while the defect of reason, as Descartes portrays it, is a defect relative to the proper categories of world-description, the defect of the senses is more serious for being a defect bound up with a set of categories which is in principle inadequate to the (real) nature of the world.

I repeat that the contrast is quite clear in principle; not less clear at any rate than the contrast between ideational and non-ideational representation, or between particular-determining and particular--classifying universals. Nevertheless, the contrast's principled clarity doesn't entitle Descartes to treat the defect of reason as a defect, specifically, of reason. By recurring to the issue of ideational incompleteness, we will see that when it comes to *making* the distinction in actual cases the clarity-in-principle is of no avail.

14. *A defect of reason?*

The distinction between an ideational and a non-ideational content of thought is no phenomenological distinction. If a content of thought is fragmentary, it cannot be established by inspection — on the basis of its 'look' or 'feel' — that the fragmentariness is technical or non-technical, i.e. that the cognition is non-ideational or ideational. To

come to a decision one must examine its *relations* with other contents of thought. How then can it be established?

The question must scrupulously be kept apart from another: what is it for a fragmentary cognition *to be* technically or non-technically fragmentary? Here the answer comes easily. A fragmentary cognition is non-technically fragmentary — it is a partial idea — if it is part of a cognition which is non-technically complete: part of the idea of a principal attribute. (A representation which is non-ideational represents an item unrelated mereologically to the representatum of an ideational whole. Given that there are only two complete ideata — thought and extension — it follows straightaway that for a representation to be technically fragmentary is for its representatum not to be a proper part of either of these ideata.) This isn't an answer to the earlier question. To be sure, if the subject can determine that one of his cognitions is part of an ideational whole he will thereby determine that is non-technically fragmentary.¹⁸ But Descartes admits that no human subject can have 'adequate' knowledge of substance; can grasp the principal attributes totally. A human subject has a weaker brand of knowledge at best, viz. 'complete' knowledge. And so, whatever the way in which a subject determines the non-technical fragmentariness of one of his cognitions, this is not that way.

I just mentioned the distinction between completeness and adequacy. This distinction is adjusted not to the question of how it is determined whether a cognition is ideationally or non-ideationally fragmentary, but to the question of what it is for a cognition to be one or the other. So to find an answer to the question of

18. It is thoroughly disconcerting, then, to find Descartes claiming in *Replies* 4 that even if a subject possesses adequate knowledge he is not *ipso facto* in a position to know that he does. For one thing, this places the claimed certainty of the *cogito* in jeopardy. For another, it therefore seems totally dogmatic for Descartes to go on to say that 'there is none but God who knows that He has adequate cognition' (/97). If we admit this, an even wider gulf than we thought is opened between the 'potential' knowledge possessed by the human subject and God's 'actual' knowledge: even the actualisation of what is potential in the human case would leave a gulf between human knowledge and the knowledge possessed by the paradigm knower.

determination — which is the crucial question — we must look elsewhere, viz. to the distinction between comprehension and apprehension. And from the tangled remarks Descartes makes about the latter pair there is, I believe, no extrication.

According to Descartes the defect of reason is principled. As a direct result he distinguishes cognitive completeness from cognitive adequacy. The nerve of the distinction can be located in *Replies* 4. 'It is one thing for a cognition to be entirely adequate...; it is quite another for our knowledge to have sufficient adequacy to let us see that we have not rendered it inadequate by an intellectual abstraction.... [W]hen I said that a thing must be comprehended in a *complete* manner, I meant not that the intellectual operation must be adequate, but merely that we must have a knowledge of the thing sufficient to let us know that it is *complete*' (/98). It is immaterial for present purposes whether or not Descartes' reply here is deemed acceptable. What counts is that he is defining 'complete grasp' in such a fashion that a subject who grasps an object completely, though having less than an adequate grasp, is still able to make inference to 'the truth'. In particular, if the subject has a complete grasp of mind and of body, and if their contents are reciprocally exclusive, the conclusion can validly be drawn that minds and bodies are really distinct.

This shows that Descartes understands 'complete' relative to figure 1. The difference between the subject who has adequate knowledge of thought and extension and the subject whose knowledge is (only) complete, is the difference between one whose condition can be pictured by figure 1 and one whose condition has to be portrayed by the following development of figure 3.

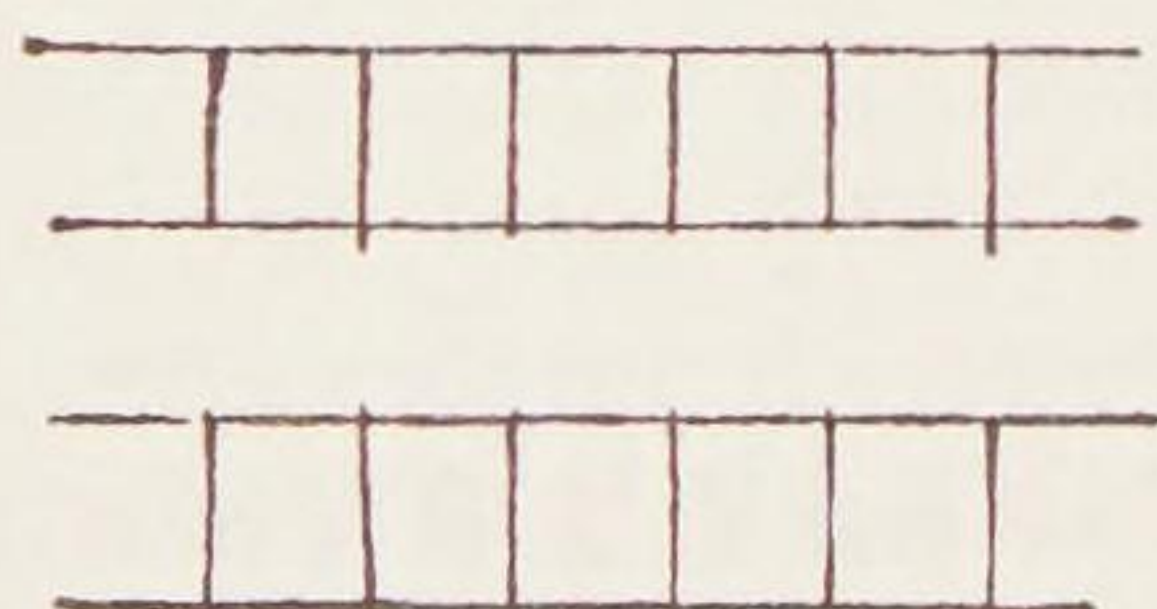


Figure 4

Because of how Descartes understands 'complete' (and it cannot fail to be recognised that, as indicated by figure 4, the word 'complete' is rather inappropriate) we have no choice but to agree that if a subject has a complete grasp of mind and of body, and if the contents of the two are mutually disjoint, then he can justifiably assert the dualist conclusion. But this leaves the crucial question entirely untouched: how can such a one *establish* that his grasp of mind and of body is complete?¹⁹

The conclusion that he cannot establish this will emerge if we take our cue from these words, quoted earlier: 'I said that a thing must be comprehended in a *complete* manner'. Why doesn't Descartes say simply that a thing must be known completely? Added by the word 'comprehend', we shall now see, is a tell-tale recognition that the crucial question hasn't been answered.

According to Descartes, the finite subject lacks a comprehensive knowledge of reality. This can be made out by seeing what follows from the various things stated about the human understanding of God. 'God cannot be comprehended by the human mind' (*Replies* 1/18); 'in the immensity of His nature...there are many things beyond the range of our comprehension' (*Principles* 1.25/229). The shortfall in the human understanding of God extends to the human understanding of extra-divine reality. We have been informed on several occasions that definitive Cartesian science traces all things back to 'the infinite perfections of God' (Discourse 5/108). Since 'in

19. Pursuant to the preceding footnote, we can detect here a possible reason for Descartes' denial that one who grasps an object adequately is *ipso facto* in a position to know that he does. If, even in the case of adequate knowledge, the question of how it is known that such knowledge is possessed requires an external answer, then it is less likely that the corresponding question—my question—will be raised for complete knowledge. 'Why (it will be responded rhetorically) are you concerned about this in the case of complete knowledge if your worry isn't even overcome in the case of adequate knowledge—which you surely agree justifies the dualist conclusion?' But this, obviously, is a terrible reason. It implies that a subject who has complete knowledge does not know that he has it, and is not in a position to know this by virtue of the completeness. Now Descartes claims no more for himself than complete knowledge of mind and of body. But if he does not know that he has it, by what conceivable right does he *assert* the dualist conclusion?

the objects of His creation, there are many things beyond the range of our comprehension' (*Principles* 1.25/229), human reason falls short, even in its serial activity, of 'embracing the whole'; falls short, therefore, of what an ideally adequate grasp involves *vis-à-vis* the extra-divine world. The non-comprehensivity of the human subject's knowledge of God is not only *pari passu*, but also *ipso facto*, a non-comprehensivity in his knowledge of the world. This, again, is the principled defect of human reason.

But Descartes claims — as claim he must — that human subjects possess an understanding of God sufficient to allow for genuine scientific knowledge of reality. There are only two possibilities here: either the human subject's grasp of God is adequate or it is complete. Since the human subject doesn't grasp God adequately, it follows that his grasp must be complete.

The difficulty now stares us in the face. In the passage from *Replies* 4 Descartes ties completeness to comprehension. Had we taken guidance solely from these lines, we might easily have concluded that though completeness falls short of adequacy, a complete grasp of some object, providing it is a comprehensive grasp, still suffices for knowledge. But we have just been driven to conclude that man's knowledge of God isn't comprehensive. It shouldn't be retorted that the non-comprehensivity here is *sui generis*; that in contradistinction to the non-comprehensivity of cognition of the extra-divine it is explained by the peculiarities — specifically, by the infinitude — of God. True, Descartes often informs us that God's infinitude places him in principle beyond our comprehension. But we saw that the non-comprehensivity of our knowledge of the divinity spills over to the extra-divine sphere. So God's special infinitude isn't special enough to save the conclusion.

So what kind of knowledge of God does Descartes allow to us humans? He allows (what he calls) an *apprehensive* knowledge. Here are some relevant texts.

[A] finite spirit cannot comprehend god, who is infinite. But that does not prevent him from apprehending Him, just as one can touch a mountain without being able to embrace it (Letter to Clerselier concerning *Objections* 5/130).

I certainly do not think that that idea [of God] is of a nature akin to the images of material things depicted in the imagination, but that it is something that we are aware of by an apprehension...of the understanding alone (*Replies* 2/37).

[I]t is just as when gazing at the sea, we are said to behold it, though our sight does not cover it all nor measure its immensity (*Replies* 1/17).

[T]he idea we possess of the infinite does not represent merely a part of it, but really the whole infinite, in that fashion in which it has to be represented through the instrumentality of a human idea (*Replies* 5/218).

The result which immediately factors out is plain: comprehension and completeness don't go hand in hand. For if a complete grasp of God can be claimed, and if that grasp is non-comprehensive, then comprehensivity isn't a condition of completeness. I repeat that this is not exclusively true of God. It applies also to the extra-divine. I spoke just above of a 'spill-over' in this connection. But Descartes also states the point independently, chastising Gassendi for 'fail[ing] to distinguish an exercise of intellect conformable to the scale of our understanding, such as each one of us experiences himself to employ in thinking about the infinite, with a concept adequate to the things, such as no one possesses not only in the matter of the infinite but perhaps not even in connection with any thing else however small' (*Replies* 5/216). Accordingly, it has to be concluded that a complete grasp can be apprehensive. And so, the putative defect of human reason comes down to this, that the human mind can in the end have at most an apprehensive grasp of the world.

But what is apprehension? What kind of cognition is apprehensive in character? We have already encountered the distinction between comprehension and apprehension in this vital pair of texts.

[W]e [can] apprehend figure, without thinking at all of a circle (although that mental act is not distinct unless we refer to some specific figure, and it does not give us a complete thing, unless it embraces the nature of the [figured] body) (*Replies* 4/99).

[A] mode...can by no means be comprehended, except it involve in its own concept the concept of the thing of which it is a mode (*Notes Against a Programme*/440).

The first passage says that an apprehensive grasp is an inadequate one, in the strong sense of 'non-ideational'. Descartes' identification of

'idea' with 'content of a clear and distinct cognitive state' confirms that the 'indistinctness' of apprehension is technical in nature. The content of an apprehensive grasp of an object can be described as 'unclear and indistinct' in the same sense as can the content of a perceptual grasp: it is partial or fragmentary.

Recur now to the figures with which Descartes illustrates the apprehensive nature of our divine knowledge. Strikingly, the figures are sense-perceptual ones: 'touching a mountain'; 'gazing at the sea'. Just so, the phrase 'near at hand' (Replies 1/18), used in describing the latter case, recalls the claim from Meditation 1 that the senses put us in contact, *inter alia*, with objects which are 'hardly perceptible, or very far away' (/145), and that optimal cases of perception are those in which I can 'extend my hand and perceive [an object]' (/146). Unfortunately for Descartes, the choice of figures is not accidental. A closer look reveals that the mechanism of an apprehensive grasp of an object is *referential*. How is it that I can correctly be characterised as gazing at (= apprehending) the immense sea although my gaze takes in only a minute portion of the body of water? The answer lies in the substitutional transparency of referential specification (or, what comes to the same, the substitutional transparency of satisfaction). If I look at the sea, and the sea is immense, then whether I am aware of this or not, I look at an immense object. But in the first passage of the pair last set off Descartes *denies* that if I apprehend a figure, and the figure is of some specific body, it can validly be concluded that I comprehend the figured body. (By contrast, if I comprehend a figure, then, if the figure is of such and such a body, it does follow that I comprehend the body.) In order for my *apprehension* of the figure to be worked up into a comprehension of the figured body, 'the nature of the [figured] body' must be built into the content of thought via which I cognise the figure. If the figure apprehended is of such and such a body, it follows that I apprehend the figure of such and such a body. The conclusion goes through here because of the referential transparency of 'apprehend'; but it does not follow that I apprehend the figure as the figure of such and such a body. Similarly, if I gaze at the sea, the truth that I see a body of water which is immense is compatible with my not seeing it as immense, or in its immensity.

Where the apprehensive grasp of some object is concerned, the 'comprehensive' description is applicable only from a position external to that of the apprehending subject. While this may also be a position he happens to be in, it cannot be his position *qua* apprehending the object. Now Descartes knows — he claims to know — that God is absolutely infinite. By referential substitutivity, it follows that he knows that if God is apprehended, an absolutely infinite being is apprehended. But the knowledge that God is absolutely infinite is knowledge external to the content of his apprehensive grasp of God. Evidently, Descartes is here referring the content of an apprehensive grasp to the content of a comprehensive grasp (i.e. saying that the first has as its object the object of the second) *from the vantage point of the latter*. This is totally objectionable. We are entitled to conclude that an inference to truth can be made from the condition of an apprehending cogniser only from a position transcendent of the position he is in. And this means that no such inference can be made from the condition of the apprehending subject.

On numerous occasions, I said that Descartes' difficulty works out in the fact that he is obliged to subordinate the general account of ideational incompleteness to the special account. We can now see why the obligation is binding on him. Reconsider the claim, in the Letter to Gibieuf of 19 January 1642, that 'to tell whether my idea has been made...inadequate by the abstraction of my mind, I merely look to see whether I have derived it...by abstraction from some more rich or more complete idea which I have in myself' (/123). This repeats the point, from the start of the section, that a decision on whether a content of thought is ideationally or non-ideationally incomplete cannot be reached on phenomenological grounds, but only by appealing to that content's interrelations with others.

Now if a content of thought is part of a principal attribute, it isn't inadequate (i.e. partial or incomplete) in the technical sense. The availability of the principal attributes to the subject would therefore enable him to come to a decision in each and every case. But Descartes' weakening of 'adequacy' to 'completeness' for humans means that a decision cannot be reached by a human subject under

the rubric of the special account. In order justifiably to classify some content of thought as ideationally incomplete, it certainly doesn't however suffice to determine that the content stands related mereologically to a wider content: the mereological pattern of interrelation obviously can hold between contents all of which are non-ideational. Our normal notion of the colour red is for instance the notion of a determinate of the determinable, colour. But that notion is non-ideational. A content of thought may that is be non-ideational *from the start*. So although the defectiveness of human reason obliges Descartes to cut the general account free of the special, he cannot live with the obligation. Implicitly at any rate, he must resubordinate the general to the special account. This means that the apparent middle ground between adequacy and inadequacy has contracted to nothing.

My large claim is borne out. The putative defect of human reason is finally indistinguishable from the defect of the senses. The critical outcome can be used on Aristotle's behalf against Plato, and its use has clear anti-Cartesian reverberations. No matter how sharply the distinction between Aristotelian and Platonic categories be specified in the abstract, it can never be established that the intensional structures of human thought about the world aren't uniformly Aristotelian.²⁰

Plato remarks in the *Republic* that 'the sensible is intermediate between being and nothingness' (477). This assessment is appropriated by Descartes when he characterises man in Meditation 4 as intermediate between God and nought. The intermediacy Descartes explains by citing man's 'imperfection' in comparison with the divinity. But though he wishes to argue, though he must indeed argue, that this is an imperfection *of reason* — of the cognitive

20. According to Cherniss, from whose book I quoted earlier, Aristotle systematically misrepresents Plato's views. Even if Cherniss is right, it cannot be inferred that the Aristotelian criticisms are nugatory. A distinction is needed between Plato's conception of his own views and what these views actually come to. Similarly, though Descartes believes his position to be structurally different from the positions of Arnauld and Gassendi, and hence believes that these critics commit an *ignoratio elenchi*, he may be mistaken.

principle man shares with God — the imperfection turns out to be more serious, viz. the constitutional imperfection of grasping the world in a sense-based way. Or, to put it forgivingly, Descartes cannot succeed in showing that the imperfection is not really the more serious one. All the signs point towards the conclusion Descartes refuses to draw, suggesting that what Descartes represents as a deviation from certain knowledge on man's part is in actuality an extrapolation from probable knowledge, and hence not only falls short of certainty but is incommensurate with it.

This has vital implications for the interpretation and evaluation of the dualist reasoning. To say that Descartes cannot show that the imperfection exemplified in human cognition is not the more serious one is to say that he cannot know that the dualist argument is even appropriate to establishing the kind of conclusion he wants. If so, Gassendi's contention about man's status as a *primus inter pares* is presumptively confirmed. So far as the reasoning Descartes offers goes, '*the difference [between men and brutes] seems to be merely one of more or less*' (*Objections* 5/146). To this crucial matter I will return, in a related connection, in the following chapter.

Two closing comments. I indicated earlier that the wax-experiment is designed to illustrate what genuine knowledge of the world is like. If the preceding criticism is sound, it is reasonable to expect that Descartes can be shown to be unentitled to claim success for the experiment. The expectation is obliquely borne out by recurring to the Spinozistic problem described at the end of chapter VI. Spinoza, I pointed out, cannot move from the agreed premise that some item isn't a substance to the conclusion that it is a substantial mode without first showing that the premised item isn't a bipolar dependency. *Mutatis mutandis*, the same applies to the wax-experiment. Descartes declares at one point that 'th[e] comprehension [of corporeal things] by the senses is in many instances very obscure and confused' (*Meditation* 6/191). This suggests that apprehension is, in the technical sense, 'confused' comprehension. If so, it follows that the content of an apprehensive grasp is constitutionally defective: the imperfection marked by the fact that the human intellect can only 'apprehend', cannot 'comprehend', is incapable of being taken as an

imperfection of reason as distinct from the defect of the senses.

Lastly, Descartes is constantly at pains to stress that God has done the best possible by human subjects. Otherwise, his goodness would be impugned. How does this square with my result? Though Descartes would certainly shudder at the outcome, it is compatible with his premises. Descartes notes that God has created me 'imperfect': he has in mind the imperfection of human *reason*. But consider the following (rhetorical) question: has God done less than the best by brutes for not having allowed them knowledge? Obviously not. God's not having made knowledge possible for a being isn't therefore at odds with his having done the best by that being. So if, *pace* Descartes, no occupiable middle ground separates divine reason and the senses — if the putative defect of human reason collapses back into the defect of the senses — then the best will have been done by a being who falls short of God in the dimension of reason even if that being grasps the world in what, from the point of view of truth, is a congenitally inadequate or probable fashion. If it follows from man's finitude that his intellectual shortfall from fully adequate cognition is the same as his need to rely on sense-delivered information, then God has made it impossible for man to achieve knowledge in precisely the same way he has made it impossible for stones to fly, viz. by making them stones. Knowledge is simply beyond a finite being like man. It might still be complained that God might have created man more in his own image. But this sounds like the complaint that God might have created beings equivalent to himself, which is no Cartesian complaint: 'I have certainly no cause to complain that God has not given me an intelligence which is more powerful...than that which I have received from Him, since it is proper to the finite understanding not to comprehend a multitude of things, and it is proper to a created understanding to be finite' (Meditation 6/177). Descartes, in short, is overoptimistic. Like a stone that dreams a dream of flying, what Descartes envisages as the best possible for man is indeed transcendent of the human condition. This, I will finish by noting, is a theme which Kant picks up. As indicated, the human meditative project is conceived on analogy with divine creation. The preceding result is that no mere analogue of the

divine situation is more than a simulacrum thereof. Just so, Kant tells us that 'intellectual intuition [can] belong solely to the primordial Being' (B72). There can be no modelling of the divine condition which isn't — to exploit a Cartesian figure — like the projection of a 3-dimensional state of affairs onto a medium of lesser dimension.

VII Language

Issue is taken with the thesis, popularised by Chomsky, that human linguistic activity is positively relevant to dualism. By reference to Descartes' writings and to the works of other thinkers of the age, language is shown to count, if anything, as a medium of 'unclear cognition', from which it follows that the cogniser, qua language user, cannot be assessed as dual. A distinction is made between an action-theoretic and a semantic consideration of language, and it is demonstrated that Chomsky's reading of Descartes, because restricted to considerations of the former sort, is largely tangential to Cartesian philosophy of mind. It is also explained that Descartes, to the extent that *he* intermingles the two, is labouring under a deep-going confusion. Specifically, he is confusing the probable/certain contrast with the matter/mind contrast.

1. *The options*

Now that we are in possession of the various deep cognition-theoretic polarities — between 'active' and 'passive' cognition, between 'scientific' and 'artistic' modes of handling a subject-matter — as well as in possession of the deep categorial distinction — between Platonic and Aristotelian categories — which lies behind these, the large option concerning language can be enunciated simply. Does linguistic representation as we know it fall within the ambit of the first member or the second of each pair? To claim that human linguistic ability links positively with Cartesian dualism is to claim that language is a medium adequate to capturing the content of an 'active' or 'scientific' cogniser's world-representative consciousness. Should it emerge that because of its very nature linguistic representation duplicates the content of a 'passive' or 'probable' mode of cognitive contact with reality, the conclusion will be forced on us that no direct support for dualism can be gleaned by harvesting the details of human linguistic activity.

I use the emotive term 'forced' here for two reasons. First, largely through the recent efforts of Chomsky, the sentiment of a positive

link between language and dualism has been elevated to the status of conventional wisdom on the topic. Chomsky is not without opponents; still, he has effectively shifted the onus of proof to their shoulders. Second, it cannot be denied that what Descartes himself says on numerous occasions about language supports a positive link. Evidently, the second reason has greater weight in a project such as ours. But though some of Descartes' words support Chomsky's reading, I shall show that these words do not, to that extent, express Descartes' considered view. It is always a more delicate matter for an interpreter to hold that the real direction of a theory is obscure to its author than to hold the reverse. So I shall take the steps needed to establish, with due regard for the texts, that Descartes' various statements to this effect ultimately trace back to a failure on his part to abide by the 'official' grammar of 'idea'. But the problem here is not merely one of inattention. I will also diagnostically explain Descartes' treatment of language by reference to his principled difficulty, which we have just finished examining at length, of abiding by this grammar. Yet again, we are brought back to that Cartesian crux, the relationship of the probable to the certain.

Broaching the problem in a preliminary way in III.5, I sought to illustrate that Chomsky's sponsorship of the first alignment is, at the very minimum, inadequately defended. Since, as I argued, Cartesian dualism has at its core the view that human rationality reflects divine rationality, the fact (if it is one) that humans are distinctive among animate beings in the use of language may well be empty of dualist import. The point is not that there are countless features of humans, e.g. anatomical ones, which mark them off sharply from sub-human beings and which have no internal links with Cartesian philosophy of mind. Rather, there are countless features of the world, including therefore features of its human inhabitants, which have no direct links with Cartesian science — neither with its mental nor with its material portion. May this not be one of them? In due course, I shall show that Chomsky's claims for a bond between language and mind, where 'mind' is understood in the sense of the dualist thesis, are based on a systematic misreading of what Descartes means when he writes, for instance, that the knower or scientist is cognitively 'active'.

Another insight will thus be provided into the dangers of construing key Cartesian *termini technici* with the aid of a modern lexicon.

These opening remarks indicate that my dispute with Chomsky is not one of those subtle disagreements to be adjudicated by poring over the details. The various queries set down in the first paragraph — queries relevant in my view to the case — are not queries to which Chomsky responds with a nay to my yea, and intones a yea when I say nay. They are queries Chomsky never addresses. So it is somewhat misleading for me to have described Chomsky's defense of the positive link between language and mind as 'inadequate' — as if to suggest that the balance might have been tilted in his favour. Because I believe that the kinds of considerations Chomsky refers to are at best incidental to root Cartesian concerns, the disagreement with him is only secondarily over results. Primarily, it is Chomsky's perception of what a positive link between language and mind amounts to that is distorted, and hence his perception of what is relevant to coming to a decision.

The pivot of dissatisfaction with Chomsky's approach can be pinpointed by nothing that Chomsky focusses throughout on an *action-theoretic* question: *how is language used?* Is language used in a stimulus-bound fashion? (This, of course, is at the core of Chomsky's celebrated debate with B.F. Skinner.) He ignores a different, *semantic* question: *what is language (capable of being) used to do?* On Chomsky's interpretation of the Cartesian position, the bearing of language on mind is a direct function of this (purportedly experimental) fact: "‘verbal behaviour’ is free of identifiable external stimuli or internal physiological states'.¹

My basic reason for rejecting this approach may be explained as follows. Descartes tells us that 'in order to understand the facts of metaphysics, the mind must be abstracted from the senses' (*Replies* 2/32). Appealing to the idea of a correlation between the character of the knower and the character of what he knows or can know, I treated the assertion to this paraphrase: because man can understand the facts of metaphysics — can conceive 'clearly and distinctly' — his

1. *Cartesian Linguistics*, p. 80.

non-corporeal nature follows. Conversely, a subject whose grasp of things is non-scientific could not, to that extent, be said to be essentially spiritual. Accordingly, man's linguistic activities will effectively mark him as dual only if these activities are suited to representing knowledge of the type which science comprises: certain knowledge. Otherwise, exactly as in the case of imagining — for imagining counts informally as a 'mode of thinking', the imagination as a 'mental faculty' — it will not be possible so to assess him. The question whether language, as a medium of representation, duplicates the content of that high-grade mode of contact with reality on which science is predicated is the same as the question whether the language user, in respect of his use of language, is a 'thinking being' in the *special* sense of the dualist thesis. Framed in these terms, my contention is that on Descartes' considered view language lacks this character. Once the various — at times radically divergent — vectors of Descartes' thinking are properly resolved and weighted, we see that the subject whose cognitive commerce with reality finds adequate expression via the mechanisms of his linguistic agency could not validly be said to be essentially spiritual in nature. This, I hasten to repeat, mustn't be taken to imply that such a subject is a denizen of Descartes' material realm. In light of our results about the skewed relations between the ontology of the probable and that of the certain, the implication's failure ought to be transparent. As a theory of human nature Cartesian dualism can fail in two distinct ways. It would fail were man incorporable into the Cartesian material realm. But it would fail too if, *pace* Descartes, the ontological assessment of man takes place entirely outside the confines of Cartesian science. The latter, I believe, is what actually occurs.

The point invites restatement. It cannot be assumed that any 'positive' feature of the world — a feature our unreflective descriptions of the world and its inhabitants would contain — will survive the transition to an 'adequate' or scientific representation of reality. A major result defended above was precisely that what transpires in the course of the journey from the probable to the certain is best denominated 'replacement'. Accordingly, should the description of the subject as a 'language-user' belong to the positive

level (as it surely does), the dualist significance of language won't be direct. What I shall be arguing, then, is that the Descartes Chomsky gives us is a *Hamlet* without the Prince. Chomsky has no interest in Cartesian science — in the distinction between the probable and the certain. He therefore sets to the task of determining the implications of language for the scientific conception of mind without first taking the necessary steps to determine language's place *vis-à-vis* the line between science and non-science.

2. Action theory vs. semantics

To clarify the contrast between how language is used and what it is used to do, thereby sharpening the distinction between an action-theoretic and a semantic treatment of language, let me proceed by disposing of an objection which can be anticipated from a Chomskian quarter. Chomsky sees his views as opposed to those of 'discourse theorists' — he lists Wittgenstein, Austin, Grice, Searle, Strawson — who maintain that 'any attempt to account for the meaning of sentences [independently of their role in communication] is either circular or inadequate'.² Chomsky is unmoved. For one thing: 'I have never suggested that "there is no interesting connection" between the structure of language and "its purpose", including communicative function, nor have I "arbitrarily assumed" that use and structure do not influence one another'.³ For another: since the discourse theorists themselves admit that, on occasion, 'we are using language for "self-communication"', and are thus 'simply expressing our thoughts',⁴ their prized distinction between considering sentences independently of their role in communication and with reference to that role collapses.

2. *Reflections on Language* (New York: Pantheon Books, 1975), p. 60. This book is a natural counterpart to *Cartesian Linguistics*. Its non-historical materials are brought directly to bear on the thesis of the latter in its final chapter.

3. *Reflections on Language*, p. 56.

4. *Reflections on Language*, p. 57.

At first blush, my contrast may seem to be the discourse theorists', which Chomsky obviously cannot fairly be accused of ignoring. However, in speaking of what language is used to do I am most definitely not making a point about communication. The concern is with the (purely) semantic issue of what language, used interpersonally, in soliloquy, or however, can accomplish representationally. So assuming that a genuine distinction can be sustained between semantic theory and discourse theory, my treatment remains throughout in the region of the former. As I see it, the terms of dispute between Chomsky and his opponents are therefore tangential to Descartes' position.

The question I am posing can be formulated by means of the distinction between ideational and non-ideational representation. Is the semantic character of linguistic modes of representation such that these modes are equal to the task of matching the 'perfection' definitive of ideational representation? Are linguistic resources — is a linguistic medium — suited to representing the world 'from the point of view of substance'?

Consider Descartes' slighting reference in Meditation 2 to 'forms of speech invented by the vulgar' (/156). *Prima facie*, these words set up a contrast with 'forms of speech which aren't vulgar'. They thus have a tendency to imply that linguistic representation isn't restricted to the non-ideational side of the frontier. However, in light of the results reached above concerning the misleading overtones of such Cartesian terms as 'vulgar', 'unclear', 'indistinct', 'imperfect', etc., the implication ought not hastily to be accepted. Descartes' casual talk of 'vulgar ideas', 'unclear ideas', etc., refers their content in the wrong way to the content of a 'perfect' or 'certain' portrayal of things. Though this reference is formulated immanently, it is really transcendent in character: 'vulgar ideas' aren't vulgarisations of non-vulgar ideas; they are representations of a wholly different kind. Similarly, 'vulgar forms of speech' might better be glossed as 'forms of speech, as we know speech', i.e. 'forms of speech, *simpliciter*'. If so, the specified implication must be declined. Just as, in moving from the probable to the certain, we move from a non-ideational type of representation to an ideational type — and accordingly move from an

ontology of non-substances to a substantial ontology — so in effecting *this* transition we may be leaving the linguistic medium behind.

The conclusion here is rested precariously on a single passage, even admittedly an ambiguous one. Fittingly then, the conclusion is tricked out with a 'might' and a 'may'. But numerous texts repeat the point, rendering the conclusion that much less conjectural. For example, Descartes complains at *Principles* 1.74 that '*we attach our concepts to words which do not accurately answer to the reality*' (/252), and he asserts that 'we can scarcely conceive of anything so distinctly as to be able to separate completely that which we conceive from the words chosen to express the same' (/ibid.).

A single theme is restated in each of these texts. It is an entirely Cartesian thought that the senses, evaluated from the viewpoint of the high-grade requirements of scientific cognition, are deceptive: 'sense' and 'deception' are yoked systematically in the Cartesian lexicon — a yoking which will occupy us at length in the sequel. With this in mind, note that the kinds of description Descartes applies to the senses are also applied on occasion to language, which shows that linguistic representation and sense-perceptual experience are at least loosely linked in his thought. Thus, once again in Meditation 2, he states that 'words often impede me and I am almost deceived by the terms of ordinary language' (/155). (I shall soon widen my purview to include philosophers of the age other than Descartes. Even before doing so in detail, it is worth drawing attention to tell-tale parallels. Compare Berkeley's claim that a proper understanding of matters 'presuppose[s] an entire deliverance from the deception of words' (*Principles* Introduction.23).) What Descartes' statement suggests echoes the claim I made about the passage set down two paragraphs back: effectively to overcome this deception requires removing to an 'extraordinary' language. And the claim is considerably clarified by the remark, to which the quotations incline, that the extraordinary language might be such that classifying it alongside language as we know it — the 'ordinary language' Descartes refers to in Meditation 2 — would be every bit as misleading as grouping ideational and non-ideational modes of representation under a single genus in a manner which pretends to disclose a real kernel of unity.

More passages having the same thrust, and in which the connection between the senses and language is extended, can be marshalled. Descartes writes in Meditation 6: 'this last mode of explaining nature...is but a purely verbal characterisation depending entirely on my thought,...and it is hence extrinsic to the things to which it is applied' (/195). (Compare Spinoza: 'all the explanations commonly given of nature are mere modes of imagining, and do not indicate the true nature of anything' (*Ethics* 1.Appendix/80.) Not only does this directly echo Descartes' denigration of Aristotelian intensions in the *Principles* as merely '*modes of thought*' (1.58/242), but the explanation of the mechanics of the relevant style of representation is also the same in each case. In the *Principles*, the 'modes of thought' referred to are abstracted similitudes; in Meditation 6 it is explained that the 'purely verbal characterisations' arise because I 'compare...a sick man and a badly constructed clock with the idea which I have of a healthy man and a well-made clock' (/195). Equally revealing is the intersection of the characterisation of the criticised descriptions as 'extrinsic' with that of sense-based determinations as 'external'. Similarly, in *Replies* 2 Descartes mentions 'modes of speaking...suited to the vulgar understanding'; these only 'contain...a truth relative to the human point of view'(/40). It is I assume superfluous to emphasise that this kind of talk, which engages the contrast between a point of view external to that of substance and the proper, substantial, viewpoint for description, is at home on the context of Descartes' critique of the senses.

Since Chomsky repeatedly draws attention to the structured character of linguistic representation, it is also enlightening to recall Descartes' claim that God 'understands... — not indeed as we do, by operations which are in some way distinct one from another, but ever by one identical and very simple action' (*Principles* 1.23/228). Though Descartes doesn't react directly to the author of *Objections* 1, who glosses '*inadequately*' as 'in a series of acts' (/3), the claim from the later work confirms his approval of the equation. Given that man's dual nature is a function of his participation in divine rationality, the question is whether language, qua used by the human

subject to formulate objective beliefs, reflects the divine intellectual affinity. Certain complications, stemming from Descartes' view that there is a specific defect of human reason which isn't traceable to the finite subject's embodiment, hamper the easy assessment of the case. But the approval tells to some extent against Chomsky. *Prima facie*, it is implied that the combinatoriality of linguistic representation betokens a deviation of finite cognition from divine cognition — which last is paradigmatically ideational. As Descartes' objector states, the human cogniser's limitations may in other words be such that he, by contrast with God, '*cannot bring forth the whole*' (/ibid.). And what does the incapacity mean? It means that the content of human world-representation is irretrievably 'fragmentary'. Should this fragmentariness connect up with non-ideational incompleteness, Chomsky's language-based dualist speculations, be their fortunes as may be in the forums of contemporary debate, would fall by the wayside as unCartesian. Should the claim that God doesn't understand as we do bear not only on the 'how' of understanding, but, owing to the difference here, on the 'what' too, the negative conclusion would follow.

Presumptive evidence exists that the Cartesian dualist significance of human linguistic activity is to be gauged by considering the semantic issue of what language, qua medium of representation, is capable of being used to do. How does Descartes himself check the non-materiality of the subject in respect of any of his faculties? He asks whether the faculty is a contributor to the task of representing the world in an adequate manner. Because Chomsky addresses the different question of whether human verbal behaviour can be ranged under the banner of conditioning and mechanical explanation, I believe that most of what he says makes contact with Descartes' thinking well beyond the point where the issue has been decided.

Presumptive evidence isn't decisive evidence. It would be churlish to maintain that the issue of mechanical explanation has no bearing on dualism. So prior to arguing that language as we know it should be assessed in Descartes' name as part-and-parcel of an 'unclear and indistinct' representation of reality, and hence isn't a cognitive medium of the dual subject, it is first obligatory to take up

Chomsky's reading on its own terms. Chomsky's misconceptions are by no means silly ones, nor is his reading without its share of textual backing. I shall therefore attempt to show that Descartes' evaluation of language resists satisfactory interpretation in action-theoretic terms, and at the same time to explain why Descartes, to the degree that he tempts the reader and is himself tempted to treat it in this way, is labouring under a set of mutually supporting confusions. In a nutshell: he confuses the contrast of matter and mind, which is receptive to Chomsky's kind of approach, with the contrast of the probable and the certain, which isn't. Why does Descartes fail to recognise the confusion? He does so because of an associated failure to distinguish scientific rationality from rationality of a weaker sort.

3. Magpies and soldiers

The proof texts cited by Chomsky to support the action-theoretic linkage of Cartesian dualism with Descartes' recognition of the uniqueness of human linguistic agency are well-represented by this:

none of our external actions can show anyone who examines them that our body is not just a self-moving machine but contains a soul with thoughts, with the exception of words, or other signs that are relevant to particular topics without expressing any passion.... I add also that these words or signs must not express any passion, to rule out not only cries of joy or sadness and the like, but also whatever can be taught by training to animals. If you teach a magpie to say good-day to its mistress, when it sees her approach, this can only be by making the utterance of this word the expression of one of its passions (Letter to [Newcastle] of 23 November 1646/206-7).

Discourse 5 contains another passage in which the same point is made. Discussing verbal behaviour, Descartes states that animals 'have no reason at all' (/117). But since Descartes is about as explicit as he ever gets in the Letter, I shall focus on it in this section.

The thematic overlap between what Descartes writes and well-known Chomskian views seems too extensive to be coincidental. Cannot Chomsky's gloss, highlighting what he takes the text's significance to be, therefore be approved? 'Descartes is...pointing out that, just as in its normal use "verbal behaviour" is free of identifiable external stimuli or internal physiological states, so it is evidently not

developed in the individual by conditioning'.⁵ Unease about Chomsky's reading is however engendered by the existence of texts in which Descartes describes *human* verbal behaviour in the same fashion as the magpie's:

although each movement of the gland [= the ultimate physical locus for the registering of external stimuli] seems to have been joined by nature to each one of our thoughts from the beginning of our life [in the way the thought of food is connected with certain digestive sensations], we may at the same time join them to others by means of custom, as experience shows us in the case of words which excite movements in the gland, which, so far as the institution of nature is concerned, do not represent to the soul more than their sound (*The Passions of the Soul* 1.50/355).

Ignoring the speculative psycho-physiology, the whole sense of Descartes' discussion presupposes the *comparability* of the principles of human and animal reaction, not their *incommensurateness*:

since we can with a little industry change the movement of the brain in animals deprived of reason, it is evident that we can do so yet more in the case of men, and that even those who have the feeblest souls can acquire a very absolute dominion over all their passions if sufficient industry is applied in training and guiding them (*ibid.*/356).

Isn't the 'training and guiding' Descartes describes here uniform in type with the 'training' spoken of in the magpie-example, the difference between the two consisting in the superior plasticity of human subject — consisting in the fact that because men alone aren't (in Descartes' phrase) 'deprived of reason' their reactions can be moulded thus to much greater effect, and can display a far greater degree of adaptive flexibility in response to environmental challenge? Just so, though Descartes takes pains to note that the 'customary' linkage of a word with a human passion can be instituted, in contrast with the sub-human linkage, 'by a solitary action, and does not require long usage' (*ibid.*/*ibid.*), there is no hint that his purpose in noting this is to distinguish sharply between them.

To gauge the significance of these facts, let us see what kind of case Descartes has in mind in *The Passions of the Soul*. An appropriate example would be that of a commander who, by patriotic harangue, or by threatening punishment, counteracts the normally overpowering inclination of his soldiers to flee when faced with the

5. *Cartesian Linguistics*, p. 80.

enemy. (I will henceforth call this 'the commander case'.) Such a case drastically exceeds that of the magpie in complexity. For instance, in order for the commander's exhortations to have their desired effect it is presupposed that those he addresses *understand* what he says: threatening, in contemporary jargon, is an illocutionary act, hence an act with a characteristic mix of semantic and intentional features. Accordingly, we would agree that the sounds the commander produces qualify, in the normal sense, as 'words': sounds with semantic value. Moreover, the efficacy of a threat of *future* sanction requires imaginative abilities on the part of the soldiers, and the attendant capacity to weigh alternatives and draw conclusions.

Now the texts show us a Descartes who co-classifies a case of this kind with the primitive type of case described in the Letter to Newcastle. But does he do so cognisant of the mismatch between their respective levels of complexity? It would seem that he does. The impression is supported by the fact that the surplus complexity in the human case is expressly regarded as substantial enough to warrant citing 'reason' as an operative factor. We are put in mind here of Gassendi's remark that '*man may be the most outstanding of the animals, yet without being detached from his place in [their] number*' (*Objections* 5/145). Judging from Descartes' treatment of the two cases, he would not seem to be disputing the point.

The following dilemma therefore faces Chomsky. If the relevance of a type of linguistic ability to Cartesian dualism is assessed by determining whether or not it can be accounted for by the mechanisms of 'conditioning', then Chomsky cannot make sense of Descartes' willingness to classify quite complex, and indeed characteristically human, cases of verbal behaviour and response, such as the case of the commander and his charges, together with cases like that of the magpie. Only in the former do we have a cooperative venture involving mutually recognised intentions on the part of speaker and hearer; a use of sounds with semantic value, and hence the mediation of understanding between acoustic input and behavioural output; a differential contribution of psychological faculties like imagination. And all these combine together to render talk of conditioning implausible. However, should Chomsky grasp

the nettle and agree that Descartes' classifications accurately reflect underlying Cartesian principles about mind, then for all Chomsky says we wouldn't be any the wiser on what it is in human verbal behaviour that moves *Descartes* to regard men as rationally distinct from sub-human animals, and hence which impels (or, better, pulls) him in a dualist direction.

Chomsky is impaled on the dilemma's latter horn. He explicitly informs us that the use of language which, in Descartes' words, 'shows' that man 'contains a soul with thoughts', isn't its use 'merely as a communicative device of report, request, or command'.⁶ But as I have just argued, the martial case is covered by the list, and can be ranged under the banner of conditioning only if the notion is stretched past the breaking point.

For negative reasons mainly, these facts point up the inconclusiveness of Chomsky's treatment. Having agreed with Descartes that complexities such as those noted above — complexities which lead Descartes to cite 'reason' as instrumental on the human side alone — fail to mark human linguistic agency off sharply from sub-human 'verbal behaviour', and having effectively conceded, therefore, that it is irrelevant to Descartes whether or not the human case can intelligibly be subsumed under the rubric of conditioning, all that Chomsky has to offer by way of explaining Descartes' meaning is the *nominal* contrast between 'use of language to express passions' and 'self-expressive use'.⁷

I do not dispute that this is the right contrast. It is quite true that the magpie can be brought in Descartes' opinion to react verbally 'only' by connecting a verbal counter with 'the expression of a passion'. Similarly, Descartes asserts that 'there has never been known an animal [other than man] so perfect as to use a sign to make other animals understand something which expressed no passion' (Letter to [Newcastle]/207). But what on earth are 'self-expressive' semiotic activities? For all that Chomsky says, a use of language which fails to qualify as 'self-expressive' may not differ in any

6. *Cartesian Linguistics*, p. 12.

7. *Cartesian Linguistics*, pp. 11-12.

significant linguistic respect from any other use we might think to advance.

So long as the distinction between 'self-expressive' verbal activities and verbal activities connected with 'passions' is construed as a distinction of form or complexity, there doesn't seem to be any pertinent difference in the offing. To judge by the textual evidence, (what I shall call) the *passion-ate* use of language may be as complex in form as any. My suggestion, accordingly, is that the distinction bears primarily on content: 'self-expressive' uses of language have a different kind of informative content than 'passion-ate' uses. The insufficiency of Chomsky's discussion here traces to his failure to recognise that Descartes' concern in making the distinction isn't at root formal. With the suggestion before us, Chomsky's putatively Cartesian sentiment that because human verbal behaviour is free of the direct control of external stimulation, 'language...can serve as a general instrument of thought'⁸ is most revealing. As we normally understand the word 'thought', and as Chomsky clearly understands it, anything can be a topic of thinking. (It is obviously no part of Chomsky's intention to imply on Descartes' behalf that a man's 'self-expressive' uses of language are those which report what acts of introspection dredge up, rather than the contents of outwardly-directly sense-perceptual acts.) Because Chomsky sees no need to counteract this normal understanding, he makes no effort to do so. But consider here Descartes' claim, which echoes the line just quoted from *Cartesian Linguistics*, that no animal has 'reached the stage...of indicating by word or sign something pertaining to pure thought' (Letter to More of 5 February 1649/245). Why 'pure thought'? Why not 'thought' unembellished? Isn't Descartes referring to a deficiency in animals which doesn't bear on the grade of complexity or degree of stimulus-freedom of their reactions to the world, semiotic or otherwise, but on the decidedly epistemic fact that, for some constitutional reason which he expresses ontologically by characterising them as 'soul-less', animals are incapable of achieving a special kind of representation, viz. a 'pure' one?

8. *Cartesian Linguistics*, p. 11.

4. *Passions and epistemology: Chomsky's error*

Without flying in the face of the fact that Descartes does introduce the issue of mechanical explicability and conditioning, the upshot, moderately expressed, is that the comparisons and contrasts he discerns cannot satisfactorily be handled in these terms alone. Only by taking a restrictive view of the texts does Chomsky succeed in supplying a plausible reading. Because I have myself insisted that Descartes' various claims must be weighted, I don't regard Chomsky's selectivity as *per se* objectionable. But Chomsky leaves us guessing on the reasons for Descartes' having left what must in his view be accounted a false trail in the texts. I will now use some of the preceding results to locate the point at which Chomsky goes astray.

Chomsky understands the phrase 'passion-ate expression' exclusively by reference to non-epistemic, non-representational, non-truth-evaluable, emotional states like the magpie's excitement and the soldier's fear. But Descartes intends the contrast between 'self-expression' and 'passion-ate expression' to belong, *inter alia*, to epistemology. Representative states which are intrinsically probable align for Descartes with a 'passive' (= other-expressive, dependent) as distinct from an 'active' (= self-expressive, independent) mode of cognitive commerce with reality. Thus, in Meditation 6, he speaks of a 'passive faculty of perception' (/91) reliance on which leads the cogniser to embrace (merely probable) *beliefs* about the world. For Descartes, a 'passion-ate' or 'passion expressing' use of language isn't necessarily restricted to emotional ejaculations which lack truth values.

I quoted above from *The Passions of the Soul*. Close reading shows how Descartes explicitly extends the term 'passion' from emotional states to (what he calls) 'unclear cognition': a *perceptual* (sc. sense-perceptual) condition — hence a condition with representative content — can qualify as 'passion-ate', and Descartes is of the opinion that among perceptual conditions those in fact qualify which 'the close alliance which exists between the soul and the body, renders confused and obscure' (1.28/344). As we know, Descartes has in mind conditions in which the representative content of the experiencer's

consciousness is covered by the 'R = V(o)' schema. Chomsky is misled then by his overly modern construal of 'passion' as pretty well synonymous with 'emotion'. What could he have made of this — we may ask — had he considered Descartes' description of the senses as 'external passions' (Discourse 5/115)?

When coupled with the general remarks of section 2, this begins to point directly to why Chomsky's discussion has a rather oblique bearing on the Cartesian position. Should Descartes in fact say that linguistic ability is significant to dualism because humans are capable of 'expressing thoughts' in their use of language, he would be saying something which far outdistances what we ourselves would indicate by employing the same words. And a similar suspicion of *ignoratio elenchi* touches Chomsky's claim that 'the study of the creative aspects of language use develops from the assumption that linguistic and mental processes are virtually identical'.⁹ On one way of reading the preceding evidence, it would seem that Descartes rests the thesis that man is a mind not on 'mental processes' or 'thoughts', as these terms are ordinarily understood, but on 'pure thoughts' or 'clear and distinct mental processes': — a distinction without an apparent difference for Chomsky.

It is true that Chomsky ignores Descartes' extension of 'passion' into the epistemological context. But it is equally true that Descartes employs the term as a synonym of 'emotion'. So it appears that Descartes' treatment of language straddles the fence between Chomsky's and the one I approve. I believe that Descartes' fence-straddling bears witness to an underlying unclarity in his thinking about language, and that Chomsky resolves the unclarity in the wrong way. I have already stated what I believe the unclarity to consist in. Here we have a first bit of elaboration. While the use of 'passion' in the magpie case is connected with the contrast between matter and mind, the term's sphere of operation in the martial case is the duality of the probable and the certain. Rather than using the versatility of 'passion' as a stick for beating Chomsky, let us therefore take it as a clue.

9. *Cartesian Linguistics*, p. 31.

5. *Descartes' classificatory motives*

Reconsider Descartes' remark that 'none of our external actions can show ... that our body is not just a self-moving machine but contains a soul with thoughts, with the exception of words' (Letter to [Newcastle]/206). In light of the following claim, also from the Letter, it would seem that Descartes is guilty here of gross exaggeration: 'dogs and cats ... scratch the earth for the purpose of burying their excrement; they hardly ever actually bury it, which shows that they act only by instinct and without thinking' (ibid./207). If the failure of dogs and cats to complete the mentioned acts 'shows' that they are unthinking, surely an endless list of human activities, performed under diverse circumstances and as often as not in the teeth of various distractions, hindrances, obstacles, 'shows' men to be more than unusually sophisticated pieces of organic hardware. Why then does Descartes assert that 'none of our external actions can show' that we are different from animals?

Our bewilderment here parallels that which gripped us while examining Chomsky's account of the themes expressed in the missive. Though Descartes co-classifies a complex case like that of the commander with a primitive one like that of the magpie, we were hard put to see how the distinctive features of the former didn't already suffice to show that the principles of human action and response are non-animal.

The perplexity in both cases has a common source. Descartes classifies modes of behaviour which are from a commonsensical viewpoint unique to human agents — unique to them not merely because of their distinctive anatomical or corporeal characteristics, but because they are uniquely intelligent — in a fashion which seems to ignore their obvious distinctiveness in this respect. But while Descartes' classificatory practice initially causes us to knit our brows, doesn't it on reflection indicate rather that we are approaching the texts under the influence of non-Cartesian classificatory expectations?

It is most enlightening to recall here the cases of the farmer and the harpist, filed away since chapter II. While both engage in complex, goal-directed, future-regarding, activities, and often carry them

through to completion despite inclemencies of weather, barbs of the critics, unyielding earth, muscular strain, etc. — the farmer reaping what he sowed, the harpist taking his curtain calls — Descartes nevertheless sharply distinguishes what they do from the genuinely 'scientific' activities of intelligent beings. The line drawn obviously doesn't segregate intelligence-involving from unintelligent, mechanical or automatic, behaviour. Any theorist of action who expects a serious hearing would be obliged to presume a difference between the latter; strenuous efforts would be required by him to counter the presumption. So if we approached *Descartes'* line from the vantage point of this contrast, as Chomsky consistently approaches his remarks about language, we would find ourselves once more bewildered. Descartes' concern, rather, is to distinguish 'pure mental' activities — those which, in the revealing words of the *Rules*, 'entirely consist in the cognitive exercise of the mind' — from activities not of this type. On the assumption that there are activities of the former sort, the line Descartes draws cuts right through the domain of what we ourselves would count as distinctively human forms of behaviour.

The early contrast between 'art' and 'science' in the *Rules* prefigures the mature distinction between the two senses of 'action': the ordinary sense in which meditation is accounted 'inaction', and the special sense in which the meditator is 'active'. And plainly, if we appeal for classificatory purposes to the latter idea of activity, a similar result ensues. Certain, in fact most, human activities turn up as 'non-activities' when 'action' is taken in its special sense. Indeed, the dualist thesis requires the latter to be sequestered from 'activities' in this sense. For the idea of divine intelligence, which informs the dualist doctrine, links internally with the special conception of action.

Can we not confidently conclude that continued bewilderment in the face of Descartes' refusal to accord dualist import to 'external actions', e.g. the actions of the farmer and the harpist, does indeed attest to a misunderstanding of Descartes' classificatory motives? Descartes doesn't gauge the dualist significance of some feature of human behaviour by reference to its degree of complexity. The

crucial question for him is whether the feature exhibits or bears witness to cognitive 'activity' in the special sense.

6. *Confusing the probable and the material*

We are now in a better position to understand why Descartes should have permitted his words to carry the implication that the case of the commander and the case of the magpie are of a piece. But here, *tout comprendre* is not *tout pardonner*. For there is something quite unsatisfactory in what we come to understand.

In order for Descartes' point, as I have interpreted it, to make good sense, there ought to be some positive similarity between the animal and the human cases, a similarity which underpins the denial that the agents in these cases exemplify cognitive 'activity'. Otherwise, the claimed comparability of the cases will have only a negative content, viz. that both differ from cases in which a subject's performances display cognitive activity in the special sense. On closer examination, and in a very revealing way, the texts can be found to show that Descartes does have a positive similarity in mind.

In discussing the 'pure' intellectual structures involved in scientific or 'adequate' cognition, Descartes states that so far as seemings and feelings go the situation of (sub-human) animals is indistinguishable from (i.e. bears a positive similarity to) the case of humans, qua sense-perceivers. 'What', he asks in Meditation 2, 'was there [in the first, inadequate, perception of wax] which might not as well have been perceived by any of the animals?' (/156). But though this indicates that Descartes does not himself think that the offered comparisons rest on an entirely negative basis, it is also, for the following reason, most revealing.

Note carefully how Descartes describes the sub-human case in Meditation 2 by using the language of sense-perceptual cognition. In a parallel fashion, he employs the idiom of final causality or purpose — the idiom of practical activity — which, whatever its scientific status, is perfectly at home in the realm of characteristically human endeavour, to describe the 'unthinking' or mechanically explicable

activities of brutes. Dogs and cats, he writes, scratch the earth 'for the purpose' of burying their excrement. In effect, Descartes is systematically borrowing modes of description of things appropriate to that realm, viz. things known by the instrumentalities of sense and imagination, and to the conception of subjects appropriate to it, viz. agents who act under the influence of practical interests, goals, aims — to characterise what is for him the (ontological) realm of matter as opposed to that of mind.

In systematically employing descriptive resources whose basic locus of operation, and locus of root intelligibility, is the probable/certain divide as if they were equally at home in the context of the matter/mind divide, Descartes is indiscriminately intermingling two quite different things. (There is *an* internal connection between the two contrasts. It will be detailed shortly. Suffice it now to say that the connection is not the direct one that would be required to rebuff the charge of indiscriminacy.) Because various human activities are not the activities of knowers, but of probable cognisers, these are not distinguished by Descartes from the activities of brutes, who of course are also non-knowers. But brutes are non-knowers in a different sense, obviously, than probable cognisers. While the latter forfeit knowledge because their beliefs are intrinsically probable, i.e. untrue, the former hold no beliefs at all, either true or untrue. Thus, though brutes are non-knowers in an extreme sense, Descartes has no compunction about describing them as, in essence, *inadequate cognisers*. And though his official view is that genuine purpose plays no role in the sub-human sphere,¹⁰ neither does he evince any unease in mobilising the idiom of final causality to characterise brutish behaviour, thereby making brutes out to be singularly inept *practical agents*.

Whatever we may think of these descriptions — and I have no fear of being contradicted in suggesting that our opinion should be low — the following is plain. Insofar as they are controlled by the probable/certain contrast, the issue of mechanical explicability doesn't arise. Even if the mentioned sub-human activities could be

10. See next footnote.

explained mechanically, that wouldn't tender any direct support to the thesis that the human activities with which they are lumped together are also explicable in this way. But it is crystal clear that Descartes sees the co-classifications as directly supporting the conclusion. What else could account for his denying that the intelligence-involving activities of farmers, harpists, and many others, 'show' man to be more than a machine?¹¹ Indubitably, he is leaping straight from the decision that a feature of human activity falls on the left side of the probable/certain dimension of contrast to the corresponding decision in respect of the material/mental polarity.

Having penetrated the thinking which informs Descartes' comparisons and contrasts, and temporarily suppressing the criticism that must inevitably arise, we can now complete the dismissal of Chomsky's action-theoretic approach.

So long as we restricted ourselves to action-theoretic considerations, neither did we understand why the magpie case and the case of the commander were lumped together, nor why complex and distinctively human activities like farming and harp-playing were denied to 'show' man to be more than a machine. Everything falls tidily into place once it is recognised that Descartes' practice is controlled by the epistemological contrast between probable and certain modes of cognition, not by the action-theoretic contrast between behaviour which is and behaviour which isn't explicable mechanically.

We are no longer bewildered. But our bewilderment has given way to a perception that Descartes is confusing the two contrasts. And so, the links are cut between his assessment of a mode of behaviour as 'irrational' and the ontological conclusion that the subject of behaviour is material as opposed to mental.

The severance can be proven with ease. Suppose that Cartesian dualism is correct. If so, mental substance really differs from material. But from the fact that the probable cogniser isn't fully rational, his materiality cannot be inferred. By exact parity of reasoning, non-

11. As Descartes' wording here indicates, it is axiomatic for him that an entity which is non-spiritual, i.e. which is material, is one whose behaviour can be explained mechanically. Thus the direct move from 'x is not a machine' to 'x contains a soul'.

substances, in the ontology of Cartesian science, are modes: monopolar dependencies of substance. But though probable objects aren't Cartesian substances, it cannot be concluded that they are substantial modes. In fact, they are not.

In light of the confusion disclosed in Descartes' thinking, a choice has to be made when it comes to the issue of language. It isn't impossible to make Chomsky's choice and interpret Descartes' remarks about language from the standpoint of the matter/mind contrast. This must however rank a poor second to interpreting them from the vantage point of the probable/certain contrast.

From the fact I have treated as decisive here — Descartes' extension of 'passion' from its common use as a synonym of 'emotion' into the epistemological context — a deeper point can be extracted. Descartes' handling of the contrast between animal and human cases is, I argued, under the control of the extended meaning. But since it is patently metaphorical to describe sub-human animals as constitutionally inadequate cognisers or as singularly inept practical agents, it may seem that this cannot be the truth. In the event, Descartes' description of animals in this partly figurative manner shows that his difficulty goes deeper. Even in the texts which are regarded as making the definitive case, Descartes hasn't established dualism. Not merely has he failed conclusively to prove that men are spiritual, but he has also, and prior to that, failed to secure complete sense for the basic ontological terms, mentality and corporeality. It is only right that this more profound failure should affect his handling of the animal case. Is Descartes really in a position to assert that brutes are material in the intended sense of the dualist thesis? I cannot see that it would be reasonable to respond affirmatively. So while we may grant that there is exaggeration (non-literality, metaphoricality) in his various descriptions of animals, there would therefore be equal and opposite exaggeration in his claiming that they are material.

7. *Irrationality: practical and scientific*

Though no point-for-point link exists between the probable/certain and the matter/mind contrast — the latter contrast being confined to the realm of certainty — they are connected. The connection, viz. that between rationality and mentality, was exposed and explored in chapter III. Unfortunately, Descartes actually follows a route not from certainty to spirituality, but from probability to materiality. Here, a corresponding connection is lacking.

Even if it is now agreed that the action-theoretic approach is wrong, the status of linguistic representation still remains unclear. Texts like the following, interpreted meaning-theoretically, can still be taken to imply that Descartes views linguistic activity as having a positive dualist significance: 'none of our external actions can show ... that our body is not just a self-moving machine but contains a soul with thoughts, with the exception of words' (Letter to [Newcastle]/206); 'there has never been known an animal [other than man] so perfect as to use a sign to make other animals understand something which expressed no passion' (ibid./207).

Exploiting the preceding results, I will argue that these remarks can't be taken at face value. After producing the general reason for hesitating here, I will then turn to the specific issue of what language, as a mode of representation, can be used to do.

To challenge Descartes' claims in the Letter, let me address what appears to be a decisive piece of intractable evidence: Descartes' remark that the absence among brutes of anything matching human verbal response testifies that they are 'deprived of reason'. (This is a variant of the statement in Discourse 5 that animals 'have no reason at all' (/117).) Given the internal link between mentality and rationality, it is evidently important to determine precisely what is being denied to animals. I will begin by showing that 'reason' and its cognates have more than a single meaning in the *corpus*, one of which is alone significant to dualism. Later I will establish that 'reason' as figuring in the quoted passages has the wrong meaning.

Recur to the activities of the farmer and the harpist. Though these cannot plausibly be described as 'unreasoned', they aren't 'rational

activities' in Descartes' positive sense, as is amply attested by Descartes' refusal to infer that humans and brutes differ from the fact that only humans complete their practical undertakings. The sense in which 'reason' is unattributable to brutes cannot therefore be the sense in which musical and agricultural activities count as the activities of 'reasoning' subjects. This is rendered even clearer by Eudoxus' (i.e. Descartes') insistence in *The Search After Truth* that 'to ... understand the nature of ... knowledge ..., I ... observe a difference which exists between the sciences and those simple forms of knowledge which can be acquired without the aid of reasoning, such as languages, history, geography, &c., or to speak generally, everything that depends on experience alone' (/309). Historical and geographical knowledge don't pass as genuinely 'scientific' for Descartes; and Descartes is certainly not suggesting that brutes possess, or can be invested with, historical and geographical information: neither is the squirrel who locates nuts previously buried a geographer, nor the salmon an historian who returns to the pool where it was spawned.

For the contrast implied by the denial of reason to animals to be germane to dualism, 'reason' must be the self-same term employed in characterising the principle of doubt as the principle of *rational* belief acceptance. PD is the axiom of Descartes' positive conception of reason. But Descartes is perfectly aware that humans who do not guide themselves by the principle are not necessarily lurching drunkenly through life, nor are they being drawn and repelled about tropistically. It doesn't follow, to use Descartes' own words, that they are acting 'only by instinct and without thinking' (Letter to [Newcastle]/207). So there are principles of *intelligent* human behaviour other than PD. Descartes points to and enunciates one such principle on several occasions: 'follow the most probable' (Discourse 3/96); 'the exigencies of action often oblige us to make up our minds before having leisure to examine matters carefully' (Meditation 6/199). These passages give sense to *a* notion of rationality: practical rationality. Assessed by the stringent standards of science, this is a form of irrationality. Otherwise, why would Descartes be at such pains to warn the prospective scientist against

approaching his subject-matter in an 'artistic' fashion? Might as well bid the noonday sun to reconsider its westward course. Accordingly, to evaluate a mode of behaviour as 'irrational' could well be to evaluate it by the yardstick of practical rationality. One who fails to govern his belief-acceptance by PD is scientifically irrational; but one who doesn't follow the most probable is practically irrational. These are different kinds of irrationality. And clearly, any contrast made in the practical arena between the rational and the irrational will amount to a contrast between two grades of scientific irrationality.

I have prodded the texts to induce them to deliver up the distinction. A reader in whom doubts stir about the Cartesian parentage of the issue might be reconciled if he pays close attention to the wording of Discourse 5. Descartes states that brutes 'have no reason at all' (/117). Why doesn't he simply say that they have no reason? Doesn't the phrasing indicate a recognition that beings who aren't equipped with reason in the fullest sense, or who, though blessed with it, are for one cause or another not employing it, may for all that act in what is naturally enough described as a 'reasoning' way? These questions are not quite rhetorical. The reader could therefore dig in his heels. Still, the reality of the distinction will be clinched by noting its links with two other distinctions (one of them has been mentioned already) which are unquestionably present in the texts.

Obviously, rationality of the practical sort can be attributed to many actors in the commonsense meaning of 'actor': human agents who follow the most probable qualify thereby as practically rational. 'Actor' and 'agent', as employed here, contrast with the homonymous terms which apply to the subject whose doxastic decisions are governed by PD. Only the latter terms connect with the divine cognitive paradigm. So the distinction between the two senses of 'reason' and its cognates mirrors the distinction between the two senses of 'action' and its relatives.

The former distinction also connects systematically with two senses in which Descartes employs 'true'. Passages examined above from Meditation 1 and *The Search After Truth*, where the eyes, ears, and so on are said to lead us astray 'occasionally', confirm Descartes' full awareness of the commonsensical ('positive') distinction between

veridical and non-veridical sense-perceptual conditions. But though the representative content of some such conditions — the veridical ones — can thus be described as 'true', this type of truth falls entirely on the left side of the probable/certain slash. Accordingly, the sense in which scientific knowledge is 'true' differs essentially, since a proposition expressing the content even of a 'veridical' sense-perceptual condition counts, scientifically speaking, as 'untrue'.

In fine: just as 'non-active' can mean either 'not practically active' or 'not scientifically active' — where practical activity and scientific activity are in principle disjoint — and just as 'not false' can mean either 'true non-realistically, i.e. probable' or 'true realistically, i.e. certain' — where probability and realist truth are disjoint — in precisely the same way 'not irrational' can mean either 'practically rational' or 'scientifically rational', where these are in principle non-intersecting.

How do these distinctions bear on our issue? Descartes describes brutes as lacking in reason, and enters as evidence their failure to display the kinds of verbal behaviour characteristic of humans. Since 'reason' is ambiguous, the description can be construed in more than one way. 'Irrational' is applied to brutes from the standpoint either of practical rationality or scientific rationality. Only if Descartes' evidence warranted its application from the latter would the linguistic activities of humans be dualistically significant.

To come to a decision here it isn't enough to determine from what standpoint Descartes thinks himself to be speaking. The question is: what standpoint is he actually speaking from? What standpoint does his evidence make sense from? This, I will argue below, is the standpoint of practical rationality. For my present purpose of challenging the reliability of the Letter as testimony bearing on the Cartesian view of language, it therefore suffices to have shown that there is an option which its author overlooks. By Descartes' own independent admission, the practical activities of humans can be assessed for rationality; the conception of rationality informing such appraisals differs from the one bound up with science. So quite apart from what Descartes might himself believe, a failure on his part to have established that the difference between men and brutes on the

score of language is more than a difference of practical rationality would oblige him to concede, willy-nilly, that the resulting man/brute contrast is destitute of dualist import. That men act adaptively in ways animals don't is not controversial; nor that human semiotic behaviour is distinctively human. But just as the superior adaptivity isn't exploited by Descartes to further the dualist thesis, it may be that the appeal to language also provides no leverage here. To come to a decision, it is I repeat necessary to determine exactly what language is capable of being used to do.

An interesting way of confirming these remarks suggests itself. Suppose that the remarks are accurate. Given that Gassendi does not recognise Descartes' scientific conception of rationality, we are entitled to expect him, should he address the issue of language, to offer this very criticism. So he does. '*You say brutes lack reason. But while doubtless they are without human reason, they do have a reason of their own. Hence evidently they cannot be called irrational except in comparison with us*' (*Objections* 5/146). Gassendi is certainly somewhat cavalier about the extent to which human and sub-human verbal behaviour are comparable. But his point is still potentially a good one, viz. the point that outside the confines of Cartesian scientific rationality the assessment of one being as rational, a second as irrational, will be a graduated matter for Descartes, unconnected with the kind of sharp gulf in being which dualism involves. In effect, Gassendi is raising the very difficulty occasioned by the ambiguity of 'reason': relative to *what* conception of rationality are animals being described as 'irrational'? Of course, Gassendi is unlikely to have seen his question to amount to this. Nevertheless, since there may be no such thing as scientific rationality, the point's force is not thereby deflected in the slightest. Consider here Descartes' astoundingly sanguine claim that 'the idea we have ... of the Divine intellect, does not differ from that we have of our own, except merely as the idea of an infinite number differs from that of a number of the second or third power' (*Replies* 2/36). While it would obviously subvert Descartes' meaning entirely, there is nothing, so far as I can see, that prevents us from substituting 'totally,' for 'merely' — a substitution whose destructive consequences for Descartes are transparent. But is

this not, in the event, precisely the kind of substitution which is implicit in Gassendi's criticism?

8. *The story so far*

To dispose of the action-theoretic approach to Descartes' position on language, I showed that his remarks about language, taken *en bloc*, can best be understood by reference to the probable/certain contrast as distinct from the matter/mind contrast. To challenge the significance of those passages where what Descartes writes is susceptible of a meaning-theoretic construal, i.e. as implying a positive link between language and dualism, I uncovered a distinction between several senses of 'reason' and its cognates, and showed that in default of further argumentation such passages could not safely be relied upon to justify situating linguistic activity, either from Descartes' perspective or in truth, on the right side of the probable/certain divide. This then is the issue outstanding. Where does language fall with respect to the polarised terms? Does linguistic representation duplicate, or is language as we know it capable of being used to duplicate, the content of that type of cognition which, according to Descartes, is essential for scientific purposes? Is there an internal link between linguistic representation and the 'R = V(o)' schema? I have not been reticent about my decision here. But I want to show that, when all is said and done, it is also Descartes' own.

9. *Senses, imagination, and passivity: mind and wax*

It is useful to begin by underscoring a parallel between what Descartes has to say about mind, when he characterises its operation in the context of sense-involving cognition, and what he says in the course of the wax-experiment. The first part of the parallel is found in this passage from Rule 12:

all our external senses, in so far as they are part of the body, ... properly speaking perceive in virtue of passivity alone, just in the way that wax

receives an impression from a seal. And it should not be thought that all we mean to assert is an analogy between the two. We ought to believe that the way is entirely the same in which the exterior figure of the sentient body is really modified by the object, as that in which the shape of the surface of the wax is altered by the seal (/36).

Now the wax-experiment of Meditation 2 is designed to show that there are object-directed intensional structures capable of providing a non-selective or V-free grasp of wax. If the representative content of the subject's consciousness is a function of 'passivity' — and note that the mature Descartes retains the *Rules*' description of the senses as 'external passions' (Discourse 5/115) — then that content is inadequate to the 'real' character of the element in question. Once the Cartesian view of a correlative relation between the character of the knower and the nature of the known is mentioned, the parallel should be apparent. So far as its 'real' nature goes, the wax is improperly represented as the bearer of modifications of the kind mentioned at the experiment's start.¹² The mind, *mutatis mutandis*, is in precisely the same case. In its 'pure' activity, the mind's representative content is not a function of 'passivity'; and so, the mind is improperly described as the instrument of this type of representation. It is of course true that Descartes refers the content of the inadequate conception of wax to the content of the 'real' conception. By the same token, the inadequate view of mind is referred to the proper view — that expressed in the dualist thesis. But the second reference is not less transcendent than the first. The line between the probable and the certain is crossed in both cases. The moral for language will soon emerge: linking language with mind involves effecting a connection which is not less transcendent of the former than linking what the inadequate conception of wax includes with the adequate conception thereof.

12. A perennial puzzle arises here. How can wax 'really' fail to be the bearer of modifications? Gassendi asks the question: *I marvel how you can maintain that, after you have finished stripping off those forms, as it were the vestures, of the wax, you perceive perfectly and clearly what the wax is* (Objections 5/147). This is a complete misrepresentation of Descartes' meaning. The 'vestures' in question are determinations bound up with a 'passive' mode of cognition. Descartes is explicit enough about this in reply. I shall return to the issue shortly.

To sound the deeper significance of the parallel, we must therefore determine what faculties are instrumental in framing the inadequate conception of wax, and determine whether linguistic representation is part of the *ensemble*.

In contraposing his own view of what adequate cognition involves with the view of his detractors, Descartes contrasts '*pure intellection*' with '*sense, memory, and imagination*' (*Notes Against a Programme*/446). And, as we saw, he does not draw conclusions about his own nature in Meditation 2 from the senses and the imagination. (Is memory an odd man out here? Consider Descartes' explicit distinction, in a Letter to Arnauld of 4 June 1648, between 'two different powers of memory', one of which he calls 'intellectual memory' (/231).) By concentrating on Descartes' phrase 'corporeal imagination', which appears not only in the *Rules* (Rule 12/39), but also survives into the mature period — it can be found for example in the discussion with Gassendi: *Objections* 5/143, 145; *Replies* 5/215, 217 — we will be able to confirm that he is quite right not to do so. The imagination is a cognitive faculty — part of a cognitive constellation — whose intensional structures are not of the proper kind. One might already have guessed this by recognising the meaning-link between 'imagination' and 'imaginary'. But let me go about the task less impressionistically.

As the above quotation from the *Notes Against a Programme* leads us to expect, the imagination is internally linked by Descartes throughout the *corpus* with the senses. For example, at Discourse 4/101 he writes: 'because our senses sometimes deceive us, I wished to suppose that nothing is just as they cause us to imagine it to be'. More revealing still in light of my citation of the wax-experiment in this connection is Eudoxus' (i.e. Descartes') remark in *The Search After Truth* that as a precondition for knowledge each of us 'should set himself once and for all to remove from his imagination all the inexact ideas which have hitherto succeeded in engraving themselves upon it, and seriously begin to form new ones, applying thereto all the strength of his intelligence with such zeal that if he does not bring them to perfection, the fault will not at least be laid on the weakness of the senses' (/312). Not only are the 'inexact ideas' traced to 'the

weakness of the senses', but they are described, precisely as in the passage quoted from the *Rules*, as 'engraved' on the imagination. And so, summing up the positive outcome of the experiment, Descartes asserts that the 'perception [of the wax] is neither an act of vision, nor of touch, nor of imagination' (Meditation 2/155).

The object-conceptions bound up with the imagination are duplications in consciousness of the 'modifications of the sentient body by the senses' — to borrow the formulation in the *Rules*. What, exactly, are these object-conceptions? Properly understood, the imagination is the cognitive instrument responsible for the content of predicates or general terms as we know them. A being whose understanding of the world essentially involves such terms must be relying on this cognitive faculty.

Consider a predicate like 'red'. A subject who knows what the predicate means has grasped *a feature of resemblance (ipso facto a feature of contrast)* between distinct objects. In recognising that one (red) object resembles another the subject displays an understanding of the predicate — i.e. shows that he is in a position to apply the predicate and assess its application. But what, cognition-theoretically, do the ability to achieve such an understanding and the related executive capacity presuppose? They presuppose that the subject can *selectively focus* on an object in this or that respect. And indeed, Descartes describes an 'image' quite generally as 'cop[ying its object] in certain respects' (*Replies* 5/221). However, the notion of selective focussing isn't comprehensible unless the subject be of such a nature as to be able selectively to focus. At first sight this will appear a very insubstantial thing to say: the actuality of the possibility presupposes the possibility's possibility. But in the Cartesian context it is substantial, as becomes clear once we recur to the divine cognitive paradigm. By definition, or essentially, the divine cogniser stands in no selective relation to an object. 'God is possessed of no senses' (*Principles* 1.23/228). Neither could such a subject acquire an understanding of such predicates, nor could he be in a position to apply them. To be able to notice a resemblance, a subject's object-directed modes of cognition must be structurally selective in character. So to deny that God is an inadequate cogniser is to say that

his world-representation is free of such terms; and to say that it is impossible for God to be an inadequate cogniser is to say that he couldn't employ them. Not only is God not a sense-perceiver, he is also therefore a cognising subject without an imaginative faculty.

As usual, trying to extract literal content from Cartesian passages about God is like trying to strain water. But the rough moral is nonetheless plain enough. The divine mind is the paradigm of mentality. So an idea of divine mentality cannot be the idea of a cognitive instrument which relates to the world via the senses and the imagination. Now 'the idea we have...of the Divine intellect, does not differ from that we have of our own' (*Replies* 2/36). Accordingly, a view of the human mind as relating via the senses and the imagination to the world is an inadequate one — no less inadequate than the conception of matter as the bearer of sensible properties.

When Descartes maintains against Gassendi that to the extent that he (really) knows the wax, this is 'not by the imagination but by the intellect alone' (*Replies* 5/215), and when he asserts against Regius that '*pure intellection* [is] intellection which deals with no corporeal images' (*Notes Against a Programme*/446), he is *inter alia* claiming that imagination-aided representation is 'unscientific' in character. So far as the discussion now stands, this means that standard predicative contents, qua giving a fragmentary, respective, portrayal of things rooted in the kind of contact typified by sense-perception, are foreign to 'clear and distinct' representation. They are foreign to it because they are integrally intertwined with the ' $R = V(o)$ ' schema. Isn't linguistic representation as we know it, with its mechanisms of singular specification and general characterisation, 'unclear and indistinct'?

A positive response is predicated on the claim of an internal link between linguistic representation and imagination. Additional clarification is called for concerning the link; it will be supplied in the next section. But that the result is historically accurate, and that the difficulties which arise for Descartes in the course of clarification don't result from a trumped-up connection between predicates and imagination, will be abundantly confirmed by elaborating on a few remarks footnoted in III.3 and cited again in V.6. In these sections it

was pointed out that Hobbes links 'names' with 'imagination', and that though Descartes doesn't seem to disapprove the link, he denies that his position succumbs to the criticism Hobbes bases on it. (Descartes responds to Hobbes as he responds to Gassendi. He draws attention to the distinction between images and pure mental conceptions.) It was also indicated that Spinoza, whose thinking is certainly Cartesian in its broad lines, makes the same point as Hobbes: 'words are a part of the imagination' (*On the Improvement of the Understanding*/33). Why the imagination? Because words, for their representative content, are 'dependent on particular bodily conditions' (ibid./ibid.). Isn't this precisely the contention Descartes advances in denigrating 'artistic' modes of treating a subject-matter because they 'depend upon an exercise and disposition of the body'? And Spinoza, more forthcoming than Descartes, explicitly tars linguistic representation with this brush. Nor does Spinoza omit to renew the assault in the *Ethics*. Our standard general terms are scientifically defective because they 'vary in each individual according as the point varies, whereby the body has been most often affected and which the mind [therefore] most easily imagines and remembers' (2P40N1). Obviously, there would be nothing conjectural about introducing the ' $R = V(o)$ ' schema to capsule Spinoza's intent.

We can return for a more informed look at the parallel mentioned at the start. Our discussion of the wax-experiment indicated that Descartes cannot determine his ontological status by remaining within the realm of 'seemings' — even if these be taken in an existentially neutral manner. A being whose representative conditions can accurately be described in terms of seemings is a being whose representative relation to his objects is not that of a spirit.¹³ And so, the wax-experiment is designed to establish that the mind's 'real' grasp of the wax does not have the intensional structure of seemings.

13. I emphasise again: to say that a subject is not a spirit is not to say that he is material. A probable cogniser is not spiritual in the sense of the dualist thesis. But neither is he a lump of matter. Very dramatically, one might express this point by stating that a Rylean conception of man is not in direct conflict with Descartes' ultimate conception.

These last paragraphs illustrate the close affinity between linguistic representation and imagination. Doesn't the same point made about the imagination transpose, then, to man's linguistic activities?

If, by his own admission, Descartes cannot successfully argue to the conclusion that he is a mind, in the sense of the dualist thesis, by appealing to the fact that he conceives the world essentially with the aid of imagination, then he is also blocked from reaching that conclusion by appeal to man's use of words. So exactly the same problem about the reference of the initial, inadequate, conception of wax to the content of the eventual, adequate, conception does arise for the corresponding reference in the case of the mind. If the inadequate conception of wax is, writ small, a model of our workaday, inadequate, conception of the material world, and if the content of this conception can only be referred transcendentally to the adequate conception of mind to the adequate one which informs the dualist thesis can only be accomplished in the same transcendent way. The initial sensible modifications ascribed to the wax do not, according to Descartes, tell us what it 'really' is like. Neither does the description of mind based on its 'external' characteristics capture its Cartesian reality.

10. Linguistic inadequacy in the classical era

Since Descartes' direct claims about language are few (a fact correctly noted by Chomsky), it is natural to look to those who carry on the project for additional illumination. The result of the immediately preceding exploration of non-Cartesian texts is a loose network comprising these notions: language, body, (corporeal) imagination, utility. Let me now stiffen up the links, which place language on the probable side of the probable/certain divide, by marshalling non-Cartesian sources in a more orderly way.

Descartes claims that 'it is of some advantage for us to have senses' (*Principles* 1.23/228). In chapter III I explained his meaning as follows. God isn't affiliated with a finite body; man's finitude works out, *inter alia*, in the fact that his (normal) corporeal affiliate is finite:

'includes divisibility'. It is thus because man, as opposed to God, has to negotiate the world from a specific location — that of his body — that it is 'advantageous' for him to be equipped with senses which put him in touch with his immediate environment. A price must however be exacted for this benefit. The most immediate, and epistemologically the most compelling, data man receives about the world are essentially fragmentary or partial in the technical fashion; they are non-ideational: 'unclear and indistinct'. Accordingly, the beliefs man normally holds are 'probable', not 'certain'. As Descartes' formulation therefore implies, the 'advantage' mentioned isn't an advantage relative to the requirements of scientific knowledge. Quite the contrary. To satisfy these requirements it is incumbent on man to refuse to be impressed by the representation of the world vouchsafed by his senses, compelling though it be.

Where does language fit into all this?

'Artistic' activities are for Descartes those which serve 'the conveniences of life' (Rule 1/2). Because of the semantic intersection between 'advantage' and 'convenience', the *prima facie* implication is that the mode of intellectual activity of a subject whose representations mirror his constitutionally selective, sense-based, relation to the world is 'artistic'. If the implication is real, and if linguistic rationality is manifested in the activities of a being who is 'passive' with respect to his subject-matter, we may anticipate a connection to exist in the classical ideology between language and utility; between language and practical as opposed to scientific rationality. Such a link is indeed prevalent in the literature, and the expected moral is constantly drawn: language is an inappropriate instrument for a *bona fide* knower.

While I do not believe that Locke is of the same mind on knowledge and reality as Descartes,¹⁴ consider how he speaks of the

14. My basic reason for disbelief, which I sequester in this footnote, isn't that Locke is an empiricist, Descartes a rationalist. It is, rather, that Locke doesn't operate with a sharp contrast between ideas and non-ideational instruments of representation. See in particular *Essay* 2.29.6, where Locke in effect construes 'incomplete idea' in just that fashion which Descartes, as shown in IV.6, would strenuously object to in principle.

importance of language by stressing the need to serve '[t]he comfort and advantage of society' (*Essay* 3.2.1). More significantly, Hume, in discussing generality, which is central to linguistic representation as we know it, tells us that '[t]his application of ideas, beyond their nature, proceeds from our collecting all their possible degrees of quantity and quality in such an imperfect manner as may serve the purposes of life' (*Treatise* 1.1.7). Note how generality is connected with imperfection and life's purposes in the space of a single sentence. It is a very similar sentiment Leibniz voices when he states that 'abstractions are necessary for the scientific explanation of things' (Letter to de Volder of 20 June 1703/531). (I happily decline to work Leibniz's claim out in any detail. The interested reader may refer back for the rudiments to the Leibniz-inspired discussion of V.9-10.) In Leibniz's view, 'scientific explanation' is phenomenal, metaphysically non-basic, explanation; it corresponds roughly to Cartesian explanation on the level of the 'unclear and indistinct'. So here too a link is forged by one of the historical principals, whose rough Cartesian affinities are not disputable, between a mode of organisation of a subject-matter which is not fully adequate to its character, viz. its organisation with the aid of 'abstractions', and considerations of utility.

The recurring linkage in the literature between language and utility tells against this Chomskian claim, that, for Descartes, 'characteristic of language is th[e] freedom from external control or practical end'.¹⁵ Pretty much the reverse is true on the evidence: the function of language as seen by the philosophers of the age is in Descartes' sense practical or 'artistic', not 'scientific' or disinterested.

The preceding texts disclose a connection between language and *praxis*. A complementary connection, reflecting and casting some light of its own back on what I see as the deeper Cartesian arrangement, can be found to hold between language and body. Those key features of linguistic representation as we know it —

15. *Cartesian Linguistics*, p. 17. Perceptibly, Chomsky shifts his theme in crossing the 'or'. 'External control' means 'conditioned control'. What do 'practical ends' have to do with conditioning?

abstraction and generality — are accounted for, both genetically and semantically, by reference to certain bodily facts.

In the course of discussing Descartes' dismissive treatment of universality in the *Principles* I drew attention to the way he explains the genesis of the peccant universals by appeal to the mechanisms of sense-perception. (This explains why he dismisses them: they are bound up with a 'probable' mode of cognition.) We find exactly the same configuration in Hume. Just above, I quoted Hume's claim that generality is a function of the 'application of ideas...beyond their nature'. This is Descartes' very point in the *Principles*: 'we avail ourselves of one and the same idea in order to think of all individual things which have a certain similitude' (1.59/242-3). Examining Hume's discussion of 'distinctions of reason' in the *Treatise* — these, N.B., are unreal distinctions, and hence lack ideational status; in Descartes' phrase, they are '*simply modes of thought*' (1.58/242) — it is no accident that we find Hume using a sense-perceptual language. It is precisely because of the selectivity which man's sense-perceptual style of contact with an object involves that he can, qua sense-perceiver, acquire an understanding and intelligibly operate in terms of such distinctions. At *Treatise* 1.1.7 Hume states that it is by virtue of our 'view[ing an object] in different aspects' that such distinctions come to be made by us. But to be able so to view an object, the subject must be capable of taking up a specific, and selective, vantage point with respect to it, and in experience as we know it it is sense-perception that involves this kind of selective relation. A sense-perceiver, qua occupying one spatial vantage point *vis-à-vis* his object, can therefore view it in different aspects. Spinoza, a very harsh critic of language, makes the same point, asserting for example that 'all the explanations commonly given of nature are mere modes of imagining, and do not indicate the true nature of anything' (*Ethics* 1. Appendix/80). This directly echoes a remark of Descartes' in Meditation 6: 'I have been in the habit of perverting the order of nature, because these perceptions of sense having been placed within me...merely for the purpose of signifying to my mind what things are beneficial or hurtful to the composite whole of which it forms a part..., I yet avail myself of them as though they were absolute rules by which I might immediate-

ly determine the essence of the bodies which are outside me, as to which, in fact, they can teach me nothing but what is most obscure and confused' (/194). And not only does Spinoza trace man's normal scientific misconceptions (his 'perverted' view of nature) to the fact that he is dominated by practical concerns — 'men do all things for an end, namely, for that which is useful to them' (*Ethics* 1. Appendix/75) — but, in a manner directly echoing Hume's claim quoted above, Spinoza also accounts for linguistic generality by reference to a certain bodily restriction. General notions only arise because 'the human body, being limited, is only capable of distinctly forming a certain number of images' (2P40N1); 'these general notions are... formed...in each individual according as the point varies, whereby the body has been most often affected' (ibid.). Expressed in our Cartesian terminology, the complaint is that linguistic generalities are 'passion-ate' notions.

Finally, consider the following two claims in conjunction. In Meditation 6 Descartes objects to a common mode of 'explaining nature'; it 'is but a purely verbal characterisation depending entirely on my thought...and...is hence extrinsic to the things to which it is applied' (/195). Spinoza, we just saw, tells us in reference to precisely the same kind of natural explanation that the explanatory resources employed are 'formed...according as the point varies, whereby the body has been most often affected'. The latter passage genuinely illuminates the former. By 'depending on my thought' Descartes doesn't mean 'having to do with pure thought'. He means precisely the opposite: 'depending on my thought insofar as it falls short of purity'. And Spinoza cites the fact that 'the human body [is] limited' in this connection. The point is thus that ordinary predicative resources are representative materials of a being who, qua using them, cannot be characterised, in full-fledged Cartesian ontology, as essentially spiritual; they are the instruments of a cognising subject for whom the imagination is an essential cognitive faculty and to whose representations the schema ' $R = V(o)$ ' applies.

The evidence, I submit, is compelling. From a semantic viewpoint, linguistic representation is in classical eyes of a kind incapable of matching the content of 'clear and distinct' representative states: it is

non-ideational. Language therefore belongs to the same family comprising passivity, sense-perception, finite embodiment, utility, and final causality; it is very much the instrument of a 'vulgar', a 'perverted', conception of things. The word 'perverted' is singularly appropriate here. To represent linguistically is to represent in a fashion which is 'thoroughly turned about': 'per-verted'. It is to fail to represent 'from the point of view of substance'. In fine, were we to be set the problem of determining what kind of subject we are dealing with, given as our datum that the subject represents the world linguistically — and this could easily be a way of setting the problem of determining what kind of subject each of us is — we would have to conclude that the subject is a practical agent, passive with respect to his subject-matter: not a spiritual being in the sense of Descartes' dualist thesis.

11. Principal attributes and determinables again

To redeem the promise to improve on the illustrative analogy between determinables and principal attributes, let me recur to Gassendi's objection to the wax-experiment. Gassendi complains that if in performing the experiment Descartes 'strips off' the wax's properties, how can he claim that a 'perfect' conception remains? Isn't the resulting product a completely abstract conception of a material thing?

It is worth considering here an argument of Spinoza's which follows the experiment's lines. Not only does the puzzle arise in an even more startling way here, but it arises in a fashion that clarifies why Gassendi's missile misses the mark. The argument is comprised by the demonstration of *Ethics* 1P15: '*There cannot exist in the universe two or more substances having the same nature or attribute*'.

If several distinct substances be granted, they must be distinguished one from the other, either by the difference of their attributes, or by the difference of their modifications. If only by the difference of their attributes, it will be granted that there cannot be more than one with an identical attribute. If by the difference of their modifications — as substance is naturally prior to its modifications, — it follows that setting the

modifications aside, and considering substance in itself, that is truly, there cannot be conceived one substance different from another.

At first sight, the reasoning is utterly preposterous. Having suggested that two substances might be distinguished 'by the difference of their modifications', by what right does Spinoza 'set...the modifications aside'? Couldn't any two things be shown in this way to be one? If, for instance, one chair is distinguished from another by reference to its colour, couldn't it be concluded that they aren't distinct by setting this difference aside?

How might Spinoza's argument be interpreted in order to avoid this most unflattering outcome? The situation is decisively altered by construing the priority of substance over modification in a non-Aristotelian way, as *explanatory priority*. If Spinoza, when he states that substance is prior, doesn't mean that no item belonging to a non-substantial category exists save as a modification of some item in the category of substance, then far from ignoring the modifications he would be appealing to them in a proper way. This interpretation of the relations between substance and modification has been encountered before — in Bracken's claim that Descartes explicates 'the relations...by...appeal to the deductive model'. If we suppose that Spinoza's thinking follows the same lines, then rather than operating with a notion of substance lacking all articulation, he would be siting that articulation in its proper place — as deductively establishable given the substantial attribute.

Because of Spinoza's ideological affinity with Descartes, the pressure to interpret his claims about substance and modification in some such fashion confirms a corresponding construal in the Cartesian case. Returning to Descartes' answer to Gassendi, it is now evident that the latter's complaint has its roots in the very misunderstanding, inspired by an Aristotelian conception of modal dependence, which produces the repellent reading of Spinoza's demonstration at *Ethics* 1P5. To the accusation that he ends up with an entirely abstract conception of material substance in the wax-experiment, Descartes replies plainly that 'my belief has always been that nothing else is required in order to manifest the nature of substance except its various attributes [sc. modal properties: N.B. the

plural form], so that our comprehension of its nature is more perfect in proportion to the number of its attributes which we discern' (*Replies* 5/213). If a 'perfect conception' involves a multiplicity of attributes, then the conception of wax vouchsafed by the experiment, qua telling us what wax really is, clearly cannot be the one Gassendi finds there.

Is Descartes merely asserting this? A pair of points needs to be made here. It would be correct to state that Descartes believes the experiment to supply an account which reveals the wax's 'internal' modal articulation. But if this largely biographical comment were left on its own, Gassendi could fairly complain that Descartes misleads the reader by suggesting that the normal, predicatively expressible, articulation of the wax is surpassed and something else laid open to view. This, indeed, is Gassendi's very complaint. Referring to Descartes' own analogy in Meditation 2 between such properties of wax as hardness, coldness, sweetness, etc., and 'vestures' such as 'clothing and hat' of which one can 'strip' an individual (*Objections* 5/147), Gassendi argues, plausibly enough, that while a man's clothes are not properties of his body, the features 'stripped off' the wax in the experiment correspond not to the clothes, but to the bodily properties, and hence that far from revealing matter in its naked reality, Descartes palms off a sheer abstraction. To this plausible objection the second point is directed. As I indicated in the preceding chapter, two theorists of wax's nature who disagree on *how* it is articulated are most unlikely to agree on *what* its articulation includes. It follows that Descartes is likely to differ from Gassendi on the latter as well. According to Gassendi, normal predicates like 'cold', 'hard', 'sweet', etc., give wax's articulation. But such predicates, which express what Gassendi himself refers to as 'accidents of the wax' (*ibid./ibid.*), are part-and-parcel of what to all intents and purposes is an Aristotelian categorial system. And whatever we might think of the view that wax's properties can be deduced, or otherwise extracted, from its attribute, it is simply false that the properties of an Aristotelian individual substance stand so related to its essence. Thus, even without deciding whether Descartes has a coherent alternative in hand, it is at any rate clear that he is at

odds with Gassendi over what wax's articulation comprises. The 'real' features of substance are not characterisable as 'accidents'. Partly for this reason, I introduced the analogy of determinables and determinates.

The resolution of the *prima facie* difficulty thrown up by Spinoza's demonstration of 1P5 is most revealing here. Whatever the ultimate verdict on Gassendi's charge, it obviously packs more rhetorical punch against Spinoza than against Descartes. Spinoza writes in a fashion which indicates that the 'priority' of substance over mode is, for him, explanatory; it is not ontological priority in the Aristotelian sense specified above. But unlike Descartes, Spinoza does not distinguish — not at this stage of his discussion at least — between modes and accidents. The distinction is made by Descartes when he describes the features of wax's articulation which the experiment strips off as 'external'. Accidents, for Descartes, are 'external features' of wax; its modes are not. 'I [must] distinguish the wax from its external forms' (Meditation 2/156). So while the analogy of the clothed man is only an analogy, it does prefigure the contrast Descartes has in mind. For the benefit of the reader who has not already called upon the following distinction, and with apologies to the reader who has, let me just mention it. Descartes' intended contrast is between monopolar determinations of material substance and bipolar or aspectual determinations.

My reason can now be explained for contending that the mechanism of modal articulation cannot be described, generally, by the phrase 'deductive transformation'. The essential fact about the properties which articulate a substance — properties comprised by a principal attribute — is this: they are not 'external' to it. And so, they may be interrelated among themselves in any way compatible with 'internality'. Deduction is one possibility here, to which Descartes himself on occasion appeals. But there is no principled reason why non-deductive patterns of interrelation should not also apply. Earlier I cited Descartes' claim from the wax-experiment that 'this piece of wax being round is capable of becoming square and of passing from a square to a triangular figure' (Meditation 2/154-5). In the passage from which this is excerpted Descartes is denying that geometrical

modes are capable of being exhaustively imagined: 'I...do not know how to compass the infinitude [of shapes] by my imagination' (ibid./155). But he obviously regards the relations between the myriad shapes along the same lines. Thus, he isn't saying (though perhaps he ought really to have said) that the imagination is incapable of accomplishing the right kind of thing; only that it is too weak to carry the appointed task through to completion. I believe that an appropriate general model is given by the idea of 'compassing' a whole by repeated variation in one of its components. Think of how the positive integers can be generated by iterated application of the function $+1$ to the first of them. Though the totality here is too large to be imagined, it can be 'compassed' by systematic application of the function. Similarly, by successive transformation of shape in accordance with some topological function, one might be able to give sense to the idea of 'getting from' squareness to triangularity; and perhaps there are functions whose employment enables the whole range of values of a physical parameter like motion or force to be taken in. As the case may be, my claim is that Descartes has this kind of transformation in mind. A nice piece of confirmation can be produced from the *Rules*, where issues of order and method are predominant. Here, in consecutive sections, Descartes speaks of recognising the ratio determining the series '3, 6, 12, 24, 48,...' (see Rule 6/18-19), and of the kind of enumerative grasp of mentality (sc. of the modes of mentality) which suffices 'to prove that the rational soul is not corporeal' (Rule 7/21).

It is an incidental bonus that the analogy between principal attributes and determinables generalises the idea of 'compassing a whole' in a fashion which indicates, in roughly the right way, that the process of transformation needn't be strictly deductive. Perhaps deductive steps could transport one through the various frequencies of electromagnetic radiation in the visible part of the spectrum. But the idea of 'getting from' red to orange deductively raises insuperable problems of comprehension. Nonetheless, the determinable, colour, includes red and orange, and one can speak quite plausibly of moving systematically through the visible colour spectrum by making minimal colour discriminations.

It is particularly important, for the following reason, to appreciate that the mechanism of 'compassing' the whole here may extend past deduction. The principal attribute, mentality, includes doubt, understanding, conception, affirmation, willing, refusal, and so on (see Meditation 2/153). But the idea of passing from one of these to another in a deductive fashion as per the number case seems entirely unconstruable. Accordingly, if the notion of transformation couldn't be generalised, the sense of figures like those offered to explain what proving dualism involves would, on their mental side anyway, be placed under a shadow of suspicion. It is I believe significant that Descartes, in his various enumerative claims, concentrates almost exclusively on the modes of mentality. This by itself suggests that he sees more difficulty on the mental than on the material side; he could otherwise have struck more of a balance in his treatment.

12. *Descartes' complacency: a diagnosis*

If the preceding semantically motivated appropriation of linguistic representation for Cartesian non-science is correct — if language belongs to the cognitive configuration comprising '*sense, memory and imagination*' (*Notes Against a Programme*/446) — it is at least puzzling that Descartes could systematically have omitted to say so, and hence, it would seem, failed to see that it is the case. An attempt has been made to account for Descartes' mischaracterisations of language by underlining various of his confusions, notably the confusion of the probable/certain contrast with the mind/matter contrast, and the related confusion of practical and scientific rationality. But it is essential to explain why Descartes is confused. A move to a deeper diagnostic level is therefore in order.

The puzzlement would be relatively superficial, and the diagnostic burden would lighten appreciably, could it justifiably be maintained that when Descartes speaks approvingly of language — when he links language positively with mind — he has some special conception of language in view: 'extraordinary language'. But the texts are not

favourable. In Discourse 5 as well as in the Letter to Newcastle Descartes is certainly speaking of language as we know it.

To be sure, there are non-thematic reasons for downplaying the significance of these texts; reasons, therefore, for believing that the diagnostic task can be abridged. For example, the *Discourse* isn't a full-fledged metaphysical essay. So is it not *prima facie* of note that the strong link between language and mind doesn't come to be repeated in the *Meditations*? Since the comments in the Letter are lifted almost *verbatim* from Discourse 5, should it not also be approached warily? The fact that over a decade separates the documents implies that Descartes is answering his correspondent informally. However, the overlap might equally be cited in support of the opposite conclusion, that Descartes sticks to what he says in the *Discourse* up to the very end. However, I believe for the following reason that the first choice should be made.

It is a clear feature of the *Meditations*, of the late chapters in particular, as well as of *The Passions of the Soul* and the *Principles*, that their author is writing firm in the conviction that dualism is correct. The second work could even aptly be described as an essay in 'applied' Cartesian metaphysics. Consider how the imagination is constantly treated here as a *mixed* faculty, delicately balanced between the mental and the material. Strictly speaking, Descartes is unentitled so to represent it unless dualism has already been proven.¹⁶ For if it hasn't already been proven — not in the relatively uninteresting sense that the proofs offered are less than entirely conclusive, but in the highly prejudicial sense that they cannot definitely be said to be relevant even to making an inconclusive case — Descartes would still be obliged to recognise an imaginative cognitive instrumentality. The imagination, by contrast with the faculty responsible for what Descartes calls 'pure thought', has 'positive' status in our everyday picture of the workings of the mind. So a failure on Descartes' part to prove dualism in the latter sense would cancel his entitlement to characterise the imagination as partly

16. Even this might not suffice. He must also show that the nature of imagination — its mechanisms and powers — can be explained in dualist terms.

mental, partly corporeal. (Quite generally, if some feature of the world is neither fully material nor fully mental, it doesn't follow that it is a bit of both. By exact parity of reasoning, a probable or (truth-involvingly) uncertain belief isn't a belief part of whose content is certain, and probable objects have no place whatever in the ontological assay dictated by Cartesian metaphysics.) Similarly, note how Descartes describes sense-perceptual conditions in *The Passions of the Soul* as those which 'the close alliance which exists between the soul and the body, renders confused and obscure' (1.28/344). As we know, the description of sense-based beliefs as uncertain can be justified apart from Descartes' having secured the putatively superior conception of things: his negative thesis about the senses is independent of any commitment to Cartesian science — though in default of Cartesian science the thesis's *negative* force would be neutralised. So again Descartes is permitting himself to incorporate a result established independently of dualism — viz. that sense-based beliefs are intrinsically probable — into a dualist conception. Consider, finally, Descartes' flagrantly partisan remark that the difficulty of securing conviction about dualism is due to the fact that his readers 'have never had experience of separation from the body' (*Replies* 2/33). Perhaps. But it may reflect a problem of another order entirely: that Cartesian dualism isn't, or hasn't been shown to be, an intelligible position.

These facts suggest that Descartes would not have been overly perturbed by the possibility that in the matter of semantics language might eventually be found to link up with the representative powers of a faculty like the imagination rather than with the intensional structures of 'pure thought'. Given Descartes' general practice of treating 'positive' features of commonsense physics and psychology from the standpoint of Cartesian science as a *fait accompli*, under the mentioned conditions he could simply do with language what he does with the imagination, viz. make a distinction between its 'pure' and its 'impure' side.

Though these remarks are not destitute of force, I am convinced that they fall short of explaining the Cartesian case with respect to language. Descartes simply doesn't make the kinds of distinctions

when it comes to language that he makes with regard to, say, the imagination. So it doesn't seem satisfactory simply to observe that Descartes tends to be overcasual in his formulations. I believe that the problem with language runs deeper, and penetrates through to the fact that Descartes, even in his own terms, hasn't supplied a clear representation of what genuinely scientific cognition is, and hence of what dualism involves. He thinks he has done these things. But he hasn't. And so, when I speak of diagnosing Descartes' manifest treatment of language I do not mean diagnosing Descartes' consciously loose handling of it; I mean something stronger: diagnosing Descartes' mistaken assessment of language.

13. *Descartes' self-misunderstanding*

The issue boils down to whether Descartes' positive linkage of language and mind is informed by the self-same notions figuring in the dualist thesis 'Minds and bodies are really distinct' (or, preferably, 'The principal attributes thought and extension are disjoint in content'). We are now equipped with the materials needed for deciding the case; and they co-operate handsomely to sustain a negative answer.

A recurrent source of difficulty in Descartes' formulations has been underscored, viz. a systematic equivocation on several interrelated Cartesian *termini technici*: 'action' and its cognates; 'reason' and its relatives; 'true' and its affiliates. We can diagnose what has gone wrong by combining this with one further fact, the fact that Descartes mistakenly takes what he describes as the defect of human reason to be, specifically, a defect *of reason*.

Towards the end of chapter III I made the following mildly critical claim. Even if Descartes has not established dualism conclusively, he may at least have shown what it would be to establish the result and have confirmed that his own dualist argumentation is so far as it goes compatible with the result's categorical establishment. I said there that this would not be for Descartes to have established nothing: the potential duality of the human subject is a useful result. But in the

aftermath of chapter IV the irenic assessment has had to be substantially toughened up. In essence, the former point comes to this: the gap between what Descartes has in fact established and what he wishes to establish is a gap which can in principle be negotiated by an arguer who is in the first position, i.e. by doing more of the same. (In terms of the figures of the preceding chapter: figure 4 must be worked up into figure 1.) By contrast, the latter point is far more punishing: the gap is such that one who is in the first position cannot justifiably claim to have established even part of what he wants, ideally, to make out. (In terms of the figures: the arguer who is in the first position cannot justifiably claim to know that his situation is pictured by figure 3.) The magnitude of the difference between the situations of the two can be modelled in a homely way by noting how vast is the contrast between claiming that a boy is potentially an adult and claiming that a man is potentially divine. The first potentiality makes good sense from the standpoint of the *terminus a quo*; the latter only from that of the *terminus ad quem*. In Descartes' overoptimistic evaluation of the gap between the potentiality and the actuality as narrower than it is we find the germ of the diagnosis we desire.

The key is the 'crucial objection' raised at III.7 against the way the idea of non-local extension was invoked to explain the superiority of the divine epistemological condition. When the objection was first aired, we weren't in a position to deal securely with it; information was lacking about the nature of Cartesian scientific knowledge. Subsequent exertions have made good this lack. What now emerges is that the objector is right. This, I hasten to add, doesn't invalidate my construal of the Cartesian link between rationality and dualism. Rather, it shows that Descartes' actual defense of dualism operates with the incorrect conception of rationality.

Formally speaking, the same ambiguity affecting each of the terms 'reason', 'action', and 'truth', also affects 'non-local extension'. To say of a mode of activity that it is 'rational' (= 'not irrational') can mean either that it is practically rational or that it is scientifically rational. Similarly, to say that a cognising subject is, in respect of his epistemological condition, 'not locally extended', can mean either

that he is extended non-locally or not extended at all; either that the representative content of his consciousness is the content of a consciousness which is extended non-locally — a ubiquitous consciousness — or that it is the content of a consciousness which isn't extended at all. On the interpretation of the link between rationality and dualism in chapter III, the divine epistemological condition was described as the condition of a subject who is not locally extended in the first sense, i.e. who is extensive with the whole rather than with a limited part. So the representative content of such a subject's consciousness is understood by extrapolation from the representative content of consciousness of a subject who is locally extended; or, perhaps preferably, the latter is understood as a limitation of the former. This content amounts, in short, to a comprehensive particular-classification. But on the account of genuine ideational cognition, the stronger interpretation of the denial of local extendedness was engaged. The representative content of the consciousness of a subject who is not locally extended in the stronger sense is particular-determining. The bearing of this fateful shift on the issue of language is relatively easy to extract.

For Descartes, the representative content of a sense-employing cogniser's view of the world is formulable by means of general terms (predicates) which express 'abstracted similitudes'. His is a view of the world as consisting of referents: satisfiers of the contents given by abstractive universals, hence a view bound up with the ' $R = V(o)$ ' schema. But universal notions of the kind which figure in a properly ideational representation of reality differ in character from these last. They are particular-determining, not particular-classifying.

Because of Descartes' principled difficulty of establishing whether any general content of thought is intellectually or sensibly abstract — his difficulty of establishing whether it is part of an inclusive, particular-determining, universal, or only expresses a feature of richer particulars — it is in principle unclear whether any specific content is bound up with imaginative cognitive structures or with 'pure' ones. And the proper initial decision, given the principled unclarity, is to group it with the particular-classifiers: the onus of proof obviously falls squarely on the shoulders of the theorist who says otherwise.

Husbanding these facts, an educated guess as to what has occurred in respect of linguistic representation would therefore run as follows.

Descartes firmly believes that there is a defect of human reason different from the defect of sense-based cognition. So he holds that the severally fragmentary or defective contents of a human mode of world-cognition which is not routed through the senses can be employed in constructing a proper, an adequate, representation of reality. If the enunciated belief were correct, this would at least be arguable. But because Descartes is in the event incapable of establishing that a 'defective' representation is intellectually as opposed to sensibly abstract, the idea of 'construction' is itself ambiguous as between construction from predicative contents and construction from 'incomplete ideas', where 'incomplete' functions technically. Happily, it is therefore unnecessary to speculate on what Descartes himself is actually thinking here. The fact remains that the achievement of an adequate grasp for man, *as described by him*, is to all intents and purposes indistinguishable from the achievement of a grasp which, however encompassing it be, remains inadequate. And this seems to me to constitute a serviceable explanation of why Descartes, despite the negative assessment of language which his position implies and which his ideationist successors state with increasing force, should have failed to stigmatise language in the name of what he regards as an adequate view of things.

Towards the close of the preceding chapter, I cited a passage from Meditation 6 in which Descartes states that the senses comprehend corporeal objects in an obscure and confused way, which implies that an 'apprehensive' grasp is a defective comprehensive grasp. Providing the reference of the content of apprehension to the content of comprehension is construed transcendentally, the implication may be allowed. But Descartes is not consistent on this matter. Elsewhere, he glosses 'comprehends' as 'apprehends...clearly and distinctly' (*Principles* 1.30/231). This last, however, is a transparent, and transparently impermissible, attempt to pave an immanent route from the apprehensive sphere to adequacy. If the content of linguistic representation is, as I have argued, apprehensive, the same instability evidenced by the opposed remarks could easily account for Descartes'

misconceptions about the relations between language and adequate representation.

14. *Kantian parallels*

A few details of this diagnosis will be taken up below in the frame of a discussion of the relations between a Cartesian and a Kantian position. Having mentioned Kant, let me now lay some more of my cards face up on the table.

It is a well-known feature of Kant's conception of the distinctiveness of his own position — which is not to say that it is a well-understood feature — that he regards himself as epochally original in acknowledging the 'discursivity' of human cognition in its intellectual aspect. If Kant's historical self-perception is right, we may therefore expect that he will have much to say that sheds light on the preceding misconceptions. To gesture in the direction of what follows, it is useful to exploit a distinction made by Kant which bears on the case, viz. the distinction between *verisimilitude* and *probability*.

Kant explains. 'In probability the reason of holding-to-be-true is...*objectively* valid; in verisimilitude, however, only *subjectively* valid' (Logic/89). Kant is using 'probable' so that the probable is immanently related to the true; 'probability', as he was quoted above to say, 'is an approximation to certainty' (ibid./ibid.). Roughly, then, Kant's verisimilar representation of things corresponds to Descartes' 'probable' representation, i.e. an 'uncertain' representation in the truth-involving sense. In these terms, the Kantian claim about language — i.e. about 'discursive representation' — would be precisely that if knowledge is understood in Descartes' sense, then language operates only in the confines of a verisimilar account of the world. And indeed, Kant links discursivity explicitly with his own transcendental idealism, denying that one who cognises the world with the (essential) aid of discursive instruments cognises it as it really is.

Visibly then, Kant's assessment matches mine. To appeal to

language is to attempt to model the content of an adequate view of things without exiting the orbit of the ' $R = V(o)$ ' schema. This, Kant would say — and in examining *The Ideal of Pure Reason* we find him saying — is to give no more than a scale of relative inadequacy. But while appeal to the scale enables one representation to be assessed as less inadequate than another, it cannot justify the claim that of the two the less inadequate conception is a more adequate one. Kant puts it as follows. A standard, the standard of certainty, governs assessments of relative probability. 'Such a standard...does not exist in mere verisimilitude, since here I compare the insufficient reasons not with the sufficient, but only with those of the opposite' (ibid./ibid.). In the arena of intrinsic probability nothing prevents one proposition from being described as 'more probable' than another. But because both are intrinsically probable, and therefore bear no internal relation to the certain, one cannot validly conclude that the former gives more of the truth than the latter. 'More probable' does not mean 'closer to certainty'. So no matter how encompassing an apprehensive conception may be, it is incommensurate with the content of a comprehensive one.

One final comment, which I have purposely delayed lest its premature statement engender fruitless, because premature, disputation, can now be set down. Commentators have often noted the gap between science and metaphysics, and have not failed to note that it is recognised by Descartes himself. Specifically, Descartes assigns a *positive* role to the senses in describing how the Cartesian scientist applies his metaphysical knowledge in world-enquiry. Throughout, I have however run 'science' and 'metaphysics' together, speaking virtually interchangeably of 'scientifically adequate cognition' and of 'cognition in accordance with the basic metaphysical determinations'. This was deliberate, as should by now be apparent. Once sense-based factors are brought onto the scene, we have really left the proper categories behind; or, in more moderate terms, Descartes cannot justifiably claim that the proper categories have not been betrayed under these circumstances. In short, directly the metaphysical level is allowed to come into contact with the senses, the metaphysical determinations undergo a sea-change. It is

not merely, as Descartes concedes, that 'the life of man is very frequently subject to error in respect to individual [sc. particular] objects' (Meditation 6/199). The point is that once a tincture of sense-perception is superadded to the metaphysical categories, it is a sense-based mode of cognition, with its anti-Cartesian categorial structure, that crystallises, inexorably, out.

VIII Kant

Kantianism is a systematic refurbishment of the negative side of a theory such as Descartes'. Thorny Kantian theses like the thesis that space is a form of intuition, that human cognitive commerce is discursive in its intellectual aspect and hence that the human subject cognises the world only as it appears, are shown to be prefigured already in Descartes' writings. The chief peculiarities of Kantian 'critique' are pacified once this dialectical connection is appreciated.

1. *Cartesianism and Kantianism*

'Cartesianism' names Descartes' positive, rationalist-realist, theory. An historical name is also available for his negative theory — about the cognitive inadequacy of the senses, unsuitability of language for scientific representation, and so on. It may come as a surprise to hear that the name is 'Kantianism'. That this label isn't generally chosen for purposes of contrast signals a flaw in the received view of the philosophical tradition we inherit. Needless to say, the links between Kant and his predecessors have been examined assiduously. But because the nature of Kant's position is itself misunderstood, these links are willy-nilly mischaracterised, with singularly unfortunate consequences for Kantian scholarship. Once it is recognised that the epistemologico-ontological constellation on the left side of the Cartesian probable/certain divide co-incides almost exactly with the Kantian position worked out in the pre-Dialectic sections of the *Critique of Pure Reason*, a high-road is open to the resolution of chronic difficulties which plague recent Kantian interpretation — specifically that of an analytic cast. Once the mentioned co-incidence is discerned, such thorny Kantian theses as that space and time are forms of intuition, that the objects of human cognitive activity are appearances, can be seen for what they really are: systematic refurbishments of negative views inchoately present in the Cartesian corpus. A slogan suggests itself as a caption for my map of the lie of the historical land: Descartes' negative theory is a proto-critique.

To help fix our bearings, two results reached above by poring over the Cartesian texts, results echoed in Kant's treatment of knowledge and reality, may be singled out. First, standard sceptical materials (SA and its train) play no demonstrative role in Descartes' critical reasoning about the senses. Second, because of the structural character of this reasoning, Descartes is committed to a distinction between the ontology of a probable and that of a certain mode of representing the world. The Kantian echoes should already be audible. Even a casual acquaintance with the *Critique* (unless otherwise stated I refer to the first *Critique*) confirms Kant's disinterest in the kinds of epistemological issue which make up SA. His 'critical' account of experience is also, in other words, structural in nature. Second, in Kant's razor sharp distinction between appearances and things in themselves we find a suitably radicalised successor to the Cartesian ontological rift.

It is easily understood why these echoes are not normally heard. In the Cartesian interpretative literature to which I have been reacting, SA is regarded as pivotal to Descartes' attack on the senses. Partly for this very reason, the transcendent character of his referral of the probable to the certain is missed. Amid the resulting static, very acute hearing indeed would be required to filter out the echoing strains. Not that Descartes can be absolved of complicity here; a lot of the static is created by his own, systematically misleading, formulations. But this is only to say the project of describing the Cartesian position is one of active interpretation, not merely of passive paraphrase.

2. *Ideas and certainty: some armchair etymology*

A promise was made in IV.1 to show on broadly etymological grounds that Descartes' understanding of 'idea' is internally bound up with the probable/certain contrast; to show that ideata, properly speaking, are objects of a distinctive kind, which fail to be cognised by the 'probable' cogniser. To kill two birds with one stone I shall now confirm the preceding points of convergence by redeeming the promise. By no stretch of the imagination do I claim that a

substantive interpretative thesis should, let alone can, be rested on etymology: certainly not on the impressionistic etymology to follow. (For one thing, I continue to operate with English translations of Descartes' texts.) But I have a number of reasons for proceeding in this way. Obviously, I cannot permit the discussion to ramify into an independent work on Kant, and the 'impressionistic' approach is quite suited to the more limited purpose of showing, in a fashion illuminating with respect both to Descartes and to Kant, that the latter is systematically colonising a negative theory of Cartesian type. Also, I have been at pains to make out in several specific cases — e.g. with reference to the contrast between 'active' and 'passive' — that Cartesian philosophical *termini* are construed anachronistically with the aid of a contemporary lexicon. A very effective, albeit preliminary, way of hammering the moral home is to illustrate that terms interrelated in Descartes' thinking would not normally be regarded by us as members of a single semantic field.

I begin with the following table, in which a single word is suspended. By allowing the word to do most of the talking, several centuries of philosophical thought concerning cognition and the world will crystallise out in a counterclockwise direction.

	certain	probable
cognitive mechanism	perception	
cognitive object		

Table 1

'Perception' is Descartes' term for the mechanism of adequate cognition. 'Those who have not studied philosophy in an orderly way ... wrongly attribute the power of perception [to their hands and eyes]' (*Principles* 1.12/223). The phrase 'clear and distinct perception' is synonymous with 'perception', so used. For a reason soon to become apparent, and as this last fact itself indicates, it is singularly unfortunate that Descartes also at times employs 'perception' when

'sense-perception' is what he means. (It is perhaps worth noting, though, that in the Latin version of Meditation 1 he uses the verb 'perceive' on only one occasion with the clear meaning 'sense-perceive', and on this occasion he writes: 'I extend my hand and perceive' (/146). The preceding quotation from the *Principles* might very well be a comment on this text. Generally, Descartes employs the phrase 'the senses' when speaking of what would be described by us in unguarded parlance as 'perception'.)

Is it an arbitrary verbal decision on Descartes' part that 'perception', properly so-called, is restricted to 'adequate cognition'? Might the decision have gone another way? The etymological facts themselves speak for the negative, and their dissent is supported by our discussion. The internal link between perception and adequacy is visible in the very structure of the first word: 'per-ception'. The dictionary tells us that one sense of the prefix 'per' is 'thorough', or 'through and through'. It thus connects in meaning with 'complete'. To per-ceive is to grasp thoroughly or completely, and this is of course a central sense which Descartes attaches to the term. An adequate grasp, since it overcomes partiality and fragmentariness, is a complete grasp.

In preceding chapters it was argued that the objects of adequate cognition — of per-ceptual contact — are of specific kind. A favoured label is 'substances'. Immediately, we can see that a superior label exists, partly cognate with 'perception': 'perfect objects'. It is therefore by no means surprising to find God characterised by Descartes as a 'supremely perfect...entity' (*Arguments Drawn up in Geometrical Fashion*/54) and also described, because he is absolutely 'perfect' (*Replies* 4/108), as the pre-eminent substance: 'He Himself does not need any cause in order to exist' (ibid./ibid.). There is in effect an internal connection between the perfection of an entity and its substantiality.

A per-ceptual grasp of the world is then a grasp 'from the point of view of substance': a grasp of the world in its substantiality. We can thus make our first addition to the table.

	certain	probable
cognitive mechanism	perception	
cognitive object	perfect	

Table 2

To what kind of objects are perfect objects to be contrasted? If we ignore the words and take guidance from the preceding identification of perfect objects with substances, we come up with an answer which is sure to lead astray, viz. that they contrast with non-substances. Despite the element of truth in the answer, it is in a more important way misleading, for a reason which should be plain. Asserting that non-substances fall on the ‘probable’ side clashes with the fact that the distinction between substances and (substantial) modes is a well-defined one *within* Cartesian science, i.e. on the ‘certain’ side. Catering both to the assertion and to the fact therefore leaves us with an indeterminate arrangement.

	certain	probable
cognitive mechanism	perception	
cognitive object	substance non-substance	

Table 3

How then should the contrast be marked? A superior answer emerges if we again let the words have the initial say. At several places Descartes counterposes ‘perfect’ or some variant to ‘defect’ or some variant. For example: ‘defect or want of some perfection’ (Meditation 4/173); ‘defect or limitation of...perfection’ (*Arguments Drawn up in Geometrical Fashion*/53). Seeking the opposed prefix to ‘per’ might already have led us to anticipate such remarks. Where ‘per’ carries the sense of thoroughness, ‘de’ speaks of limitation, falling away, deviation. So Descartes’ words direct us to fill in the third frame as follows.

	certain	probable
cognitive mechanism	perception	
cognitive object	perfect	defect

Table 4

The dialectical advantage accruing to us here will become vividly apparent once the final move (and I urge the reader to hazard a guess) is made. (Wasn't it the choice of the contrast marked in table 3 that necessitated the laborious discussion of chapters IV and V?) The verbal facts dictate a single answer to the question of the identity of the cognitive mechanism of probable knowledge. Though, independently of these facts, we know full-well that the mechanism is sense-perception, the *mot juste* is of course 'deception'. The structural character of Descartes' sense-critique, on which so much energy was expended, is made manifest by the completed table.

	certain	probable
cognitive mechanism	perception	deception
cognitive object	perfect	defect

Table 5

Looking to the sources for confirmation, the systematic inter-linkage of the various terms leaps up from the pages. Here are some examples. (I restrict myself to verbal groupings within single sentences. The list would expand geometrically if even a marginally wider unit were considered.) Discourse 4: 'sense...deceive' (/101); 'deceive...senses' (/105). Meditation 1: 'senses...deceptive' (/145); 'senses...deceive' (ibid.). Meditation 3: 'perfections...defect...imperfection' (/171); 'deceiver...deception...defect' (/ibid.). Meditation 4: 'deceive...deception...imperfection...deception...deceive' (/172). *Principles* 1.4: 'senses...deceived' (/220). *Principles* 1.5: 'less perfect...-

not so perfect...deceived' (/ibid.). *The Search After Truth*: 'imperfect senses' (/312); 'senses...deceive' (/313). And so on.

That the various terms are interwoven into a tightly-knit semantic fabric cannot reasonably be doubted. Nor is there any need for hesitation in saying that those interpreters who react overly quickly to Descartes' various claims that the senses 'sometimes' deceive us are themselves deceived. Though Descartes regards the senses as in principle deceptive, he is quite aware of the mundane distinction between veridical and non-veridical sense-perceptual states. But that one can make a distinction among states which are one and all the province of a structurally defective mode of cognition does not mean that states of either kind will deliver the truth. And indeed, if we now return to Descartes' initial presentation of the principle of doubt in Meditation 1, do we not find him making exactly this point? We ought, he states, to withhold assent from matters which are not entirely certain and indubitable 'no less carefully' (/145) than from those which 'appear...manifestly to be false' (/ibid.). The latter matters are those which the senses disconfirm; they are false 'manifestly'. The former, including among them therefore beliefs based on sense-experience of the 'veridical' sort, are also false, though not 'manifestly': they are to be repudiated for the structural reason.

3. *Space as a form of intuition*

Soon I will take this rough etymologising a step further. But the interim result can already be exploited to clarify one of those Kantian theses which cause such difficulty, viz. that space is a form of intuition. The thesis is anticipated in Descartes' own critique of the senses. It would not in fact be a violent exaggeration to say that sense-based cognition is scientifically disreputable according to Descartes *because* space is its form. For reasons to be given, this isn't something Descartes could himself have said. But his inability to say it doesn't show that it fails, on a deeper level, to express a truth for one with Cartesian commitments.

This perhaps startling attribution is confirmed with comparative

ease by recurring to the early discussion of the senses. Consider how Descartes' dismissal of the senses — his contention that the representative content of the sense-experiencer's consciousness gives at best a 'fragmentary' and hence 'inadequate' picture of an object — is traced back to the *relationality* of the sense-perceptual nexus. What kind of relation is responsible? As we saw, the fragmentation which congenitally mars sense-perceptual data results from the fact that the subject, in perceiving the object via the senses, stands in some one *spatial* relation to it; he views it from one place or, as we say, 'point of view', and hence is excluded at that time from occupying any of the many other possible vantage points. Given that the spatiality of the sense-perceptual relation is responsible for this fragmentariness, it would be natural for Descartes to say that *space is a form of sense-perceptual cognition*.

This may seem to fall very far short of the official Kantian thesis that space is a *subjective* form of intuiting an object. Doesn't Kant maintain that 'space and time are rightly ascribed to the objects of the senses' *only* 'in [their] relation to the subject' — only, in other words, when such objects are considered as 'appearance[s]' (B70a)? Despite the devilish obscurity of the details, Kant's meaning is clear enough: eliminate the sense-perceiving subject and you have *ipso facto* done away with space. But how do the considerations of the preceding paragraph imply that objects themselves aren't really interrelated spatially?

The difficulty, as a difficulty of interpretation, is dispelled once we force Descartes to pay more serious heed to the implications of his own contention that the spatiality of the sense-perceptual nexus renders sense-experience *inadequate*. In working out the dialectical links between a Kantian and a pre-Kantian position, we must not ask: 'Is space a feature of things as they really are?' The proper question is: 'Suppose a philosopher maintains that sense-perceptual data are in principle inadequate or distortive *because* the sense-experiencing subject stands in a selective relation to the object; can such a one consistently permit himself to speak as if anything like space as we know it will survive once the source of the inadequacy has been eliminated?' Leibniz, who shares Descartes' distaste for the senses,

answers the latter question negatively, holding that spatiality as normally understood is constitutionally bound up with 'subjectivity', and hence that spatial characteristics cannot be assigned in any straightforward way to 'things in themselves'. Descartes is therefore speaking loosely — not to say complacently — when he allows his words to suggest that a phenomenologically recognisable counterpart to space will remain once an adequate mode of cognition is engaged. To be sure, more than one possibility exists here, since we aren't dealing in logical necessities. Spinoza, less radical than Leibniz, allots to extension the status of a (basic) attribute. But I have shown that Spinoza's treatment is indiscriminate on the contrast, and on the implications of the contrast, between bipolarity and monopolarity. So the same criticism might apply to him as to Descartes. Table 3 of the preceding section is signally revealing here. By failing to note that the term 'non-substance' covers both items which are non-substantial but which are mereologically related to substances (these are substantial modes) and items which are not substances but which are not related in this way to substances (these I have dubbed 'aspects') Spinoza elides a metaphysically vital distinction, and the resulting havoc created in his system is considerable.

Once this is recognised, the crucial question about Kant's position virtually advances itself: is space, qua form of sense-perceptual cognition, the form of objects which are less than substantial in the first or in the second sense? The bipolarity of the sense-perceptual nexus — its not being perception solely 'from the viewpoint of substance' — clearly implies the latter choice. Space, on Kant's view, is mistakenly characterised as the form of objects which are monopolar dependencies of substance. It is the form of *radically defective objects*, which have no place whatever in an ontology like Spinoza's or Descartes'. We can conclude that the question posed at the outset, viz. 'Is space a feature of objects as they really are?', is dialectically improper. In fact, Kant explicitly notes that one whose basic relation to objects is sense-perceptual cognises objects of a characteristic kind. 'Space and time ... are ... conditions under which alone [the mind] can receive representations of objects, and which therefore *must* also always *affect the concept of these objects*'

(A77/B102: emphasis added). So the temptation, to which most commentators succumb, to say that Kant ought to have presented himself as no more than a sceptic about the transcendent reality of space and time is a temptation spawned by misunderstanding, which must be resisted. It would be possible intelligibly to represent Kant as a sceptic here only if there were no ontological difference between the position he advocates and the one he rejects. Otherwise, one might as well suggest that all of us ought in strictness to be sceptical about whether numbers are spatially interrelated, and avoid categorically denying it.

The point that Kant's opposition to his predecessors' views has an ontological face goes very deep indeed, and bears also on what I believe to be a profound misunderstanding of the 'critical' account of causality in recent Kantian literature. If Kantian ontology differs from Humean ontology in the way it differs from the ontology of Cartesianism, and if the causal tie is analysed by Hume with reference to *his* ontology, then, given that Kant opposes Hume on the 'irrationality' of the causal tie it is dialectically insensitive to represent Kant's anti-Humeanism by saying of Kant that he maintains the causal tie to be rational where Hume asserts the reverse. In the last passage quoted Kant states that the sense-perceptuality of our mode of cognitive contact with objects has implications for what these objects might be. Consider also his claim that 'once we have allowed ourselves to assume a self-subsistent reality entirely outside the field of sensibility, appearances can only be viewed as contingent modes' (A566/B594). Does this remark extend to Hume? Kant so extends it. 'Hume took the objects of experience as things in themselves' (*Critique of Practical Reason*/54). Because Kant's analysis of causality is premised on the assumption that the 'objects of experience', causal fundamentals among them, are not as Hume thinks them to be, it follows that the Kantian causal tie holds between entities which cannot qualify as causal relata from Hume's official ontological viewpoint. But where does Hume deny that the relations between *such* entities are 'rational'? He never denies anything of the sort.

Subject to additional confirmation (not to be supplied here) that

from the Humean standpoint like from the Cartesian Kant's is an ontology of 'defective' objects, the following precise parallel emerges between the dialectical character of the Kantian position on spatiality and on causality. The thesis that space is a form of intuition doesn't oppose anything Descartes maintains. It is in fact a systematic development of what Descartes holds to be true on the left side of the probable/certain divide. Similarly, Kant's thesis about the non-irrationality of the causal tie expresses something Hume might have endorsed, had he only taken the trouble to distinguish in full detail between mundane cognition and his own official conception of the basic cognitive relation of subject to object.

The root point here, which I close by restating without embellishment, has an especial importance for a proper understanding of the nature of Kantian critique. The intelligibility of characterising one philosopher as sceptical with regard to the truth of the position of another presupposes categorial uniformity between the two. But Kant's categories are broadly speaking Aristotelian, while the metaphysically basic determinations on Descartes' kind of realist view — and this might now more appropriately be styled 'super-realism', so as to conserve a verbal place for Kant's claim that his theory sustains an empirical realism — are non-Aristotelian. Consequently, to complain that Kant ought in strictness to have represented himself as no more than a sceptic about the transcendental reality of space is to sin against the mentioned condition of intelligibility.

4. *'Perception' and 'ideation': more armchair etymology*

The quotations assembled at the end of section 2 illustrate that within the constellation comprising 'perception', 'perfect', and 'deception', the first term isn't as closely associated by Descartes with the others as they are among themselves. I believe there to be a reason for this, one which further illuminates the relations between Descartes and Kant. The verb root of 'perception', '*capere*', means 'to grasp'. The same meaning attaches to the root of the English 'concept' and the

German '*Begriff*'. In the Cartesian texts there is another set of terms, with a different root, members of which tend to be used when on the strength of table 5 'perception' and its cognates might be expected. These are words based on the root 'to see'. In fact, it is possible to discern why this should be so. As I mentioned, when 'perception' means 'adequate perception', Descartes' official expansion thereof is 'clear and distinct perception'. But 'clarity' and '(manual) grasp' are odd bedfellows. Though it can quite idiomatically be said of someone that he has an 'unclear grasp' of some subject-matter, there is a mixing of realms in the phrase: the visual and the tactile. (We do not speak of a 'firm view'.) The other word I alluded to — or one of the set — is 'intuition', which does have the proper verbal root: '*tueri*', Latin for 'look upon', 'look at', 'contemplate', 'behold'. A sensitive rendering of 'intuition' would therefore be as 'insight'. (As a piece of etymological kitsch, one might say that a subject who 'intuits' an object is 'into it'.)

There is a term, linked etymologically with 'to see', which is widely employed to specify instruments of an 'intuitive' mode of cognition: 'idea'. The Greek root of 'idea', which can be discerned in the Latin '*videre*', is cognate with the English 'vision'. Thus Descartes uses the phrase 'simple act of mental vision' (*Replies* 2/38) when describing an adequate representation of an object. And, close upon linking 'certitude' with 'the clear perceptions of the intellect' (*ibid.*/42) and alluding to 'matters that are perceived very clearly by our intellect' (*ibid.*/*ibid.*), he praises 'those persons who have sought to draw the clearness of their vision from the intellect alone' (*ibid.*/*ibid.*).

The term 'idea' is firmly tied by Kant to the notion of 'vision'. Platonic ideas are characterised as follows in the *Critique*. 'Plato made use of the expression "idea" in such a way as quite evidently to have meant by it something which not only can never be borrowed from the senses but far surpasses even the concepts of the understanding (with which Aristotle occupied himself)' (A313/B370). 'The *Republic* of Plato has become proverbial as a striking example of a supposedly visionary perfection' (A316/B372). Quite generally, Kant glosses a term — '*Schwärmerei*' — sometimes rendered loosely in English as

'visions', by speaking of 'reason ... no[t] allow[ing] itself to be kept within bounds'(B128). (In the *Critique of Judgement* the same term is connected with the phrase 'seeing something beyond all bounds of sensibility' (29/116).)

It is of more than mere amusement-value to note how Descartes' own kind of point about the imagination is turned against him here. We saw that Descartes exploits the link between 'imagination' and 'imaginary' to impugn a mode of cognition making essential use of the imaginative faculty. Kant, for whom the imagination is cognitively indispensable, exploits the link between 'vision' and 'visionary' to return the compliment. Similarly, Descartes' criticism of an 'artistic' mode of cognition in the *Rules* plays on the connection between 'art', 'artifice', and 'artificiality'. So far as I know, Kant doesn't address this last verbal constellation. But his implied reaction is nevertheless apparent in the choice of 'concept' ('*Begriff*'), with its manual connotations, to name the basic human intellectual instrument. Descartes' descriptions of the 'artistic' activities of the farmer and the musician emphasise their 'manual' mode of dealing with the world, and Descartes issues the stern warning to prospective scientists against this kind of approach. So once again Kant, far from denying the Cartesian descriptions, is adapting them to his own ends.

It was remarked earlier that 'perception' in the series of tables isn't quite the *mot juste*. Though the intimations it carries of thoroughness or completeness render the word roughly appropriate, its manual connotations are cacophonous in the Cartesian context. The superior term, obviously, is 'ideation'. 'Ideation' gives a better line on what the mentioned thoroughness or completeness comes to from a cognition-theoretic vantage point: one who ideates has in-sight into an object; the thoroughness of his grasp is not that characteristic of a manual type of object manipulation, whereby the object is turned over and over, the better to be understood by being probed from a multiplicity of (external) standpoints. (The blind man negotiates the world by touch, by poking at it. Glossing his claim that empiricism, qua placing all the stress on intuitions, is blind, Kant asserts: 'Empiricism is based on touch' (*Critique of Practical Reason*/14).) Evidently then, the notion of in-sight is closely bound up with the conception of

adequate cognition as being 'from the point of view of substance'. In the very structure of the word we find a denial that the schema ' $R = V(o)$ ' applies to the representation thereby gained.

The Kantian resonance of these facts is readily felt. How could one who lacks an in-sightful grasp of an object be characterised? Due to his failure of in-sight he might aptly be said to have a constitutionally *external* understanding. This failure is suitably captured by saying that he possesses no more than an out-sight, grasping the object 'from without' or 'externally', not 'from within'. Kant employs '*anschauen*' and its cognates to describe the mode of contact between (human) experiencers and their objects. In the standard English edition of the *Critique*, '*Anschauung*' is rendered as 'intuition'. But the German word's structure indicates this to be a misrendering. Translated part-by-part, '*An-schauung*' comes out thus 'at-sight', or 'to-sight', with the connotations of externality preserved.

These crude verbal facts again illustrate how Kant is formulating his position on the character of cognition by appropriating, without effecting any very radical changes to, an account of inadequate cognition like Descartes'. In the idea that the basic mode of contact between the (human) subject and the world places the former in a position 'external' to the latter, Kant is therefore denying that human cognitive representation is 'ideational'. And, it should be virtually unnecessary to add, part-and-parcel of this denial is the claim, whose roots are also clearly found in Descartes' structural account of sense-perception, that human cognisers are at least in part 'passive' with respect to the world they seek to understand. In the *Dissertation* of 1770 Kant states this plainly: 'the *intuition* of our mind is always passive' (10/60). And the claim is central to the description of cognition in the *Critique*. '[I]ntuition takes place only in so far as the object is given to us. This ... is only possible, to man at least, in so far as the mind is affected in a certain way. The capacity (receptivity) for receiving representations through the mode in which we are affected by objects, is entitled *sensibility*' (A19/B33).

One further, related, parallel between Descartes and Kant can be noted here. In an earlier chapter, we saw how Descartes uses the model of a seal and a wax tablet to explain the nature of sense-based

contact with an object. The model has three crucial features. First, the wax is *passive* in respect of the representation of the seal. Second, the wax takes the imprint of the seal *from the outside*: the seal is 'impressed' on the tablet. Third, only one face of the seal is imprinted on the wax, and so the resulting representation is *partial*. (The excellence of Spinoza's word — 'superficial' — to describe sense-based contact is particularly evident in this last feature.) Kant's description of sensible intuition echoes all three features (I will deal with the third below). Kant stresses the 'passivity' of the mind in respect of its sensible representations; and he insists that sense-based representation is incapable of capturing the 'internal' character of the object represented. These points are tidily packaged in Kant's term 'ectype', employed now and again to contrast his position with a Platonic one. Thus, after referring explicitly to Plato, Kant remarks on 'the philosopher's spiritual flight from the ectypal mode of reflecting upon the physical world-order to the architectonic ordering of it ... according to ideas' (A318/B375). What, precisely, is an 'ectype'? It is an ex-type: a representation 'from the outside'. Kant's German word is '*Copei*', which we can gloss as 'copy in some respect', intending thereby a contrast with 'perfect copy'. This, needless to add, is immediately reminiscent of Cartesian descriptions of images: 'an image is not such that it is identical with that of which it is an image in all particulars [;] ... it copies it [only] in certain respects' (*Replies* 5/221).

To the degree that armchair etymology can illustrate, these observations illustrate that the very term 'idea' is internally linked in the Cartesian lexicon with the probable/certain contrast. So the left side of table 5 can be reformulated and extended upwards.

	certain
cognitive instrument	idea
cognitive mechanism	ideation
cognitive object	ideatum

Table 6

To amplify on the Kantian *ensemble*, represented by the remainder of the full table, I propose to proceed in a different register, by taking up a *prima facie* puzzling feature of Kant's philosophical method, viz. the method called 'critique'. This will bring us back to the slogan enunciated at the start that Descartes' negative theory is a proto-critique.

5. Kant's critique and Descartes' proto-critique

Critique is the reflexive examination of the nature and powers of cognition; of 'the mode of our knowledge of objects' (A11-12/B25). Now 'sense, memory, and imagination' belong, according to Descartes, to an intrinsically probable style of experience. As is obvious from Kant's three-fold synthesis — apprehension in intuition, reproduction in imagination, recognition in concept — each member of the trio occupies a prominent place in the positive Kantian account of human cognitive commerce with objects.

The puzzling feature alluded to is already evident. Descartes doesn't deny that the senses, imagination, and memory play a role in cognising the world; he denies that these faculties are instrumental in 'scientific' or 'adequate' cognition. But Kant, in conducting his reflexive enquiry focusses on a mode of experience which includes the listed faculties, and his 'transcendental' results are predicated on their contribution. Since these results are thus achieved relative to the assumption that the subject is cognising in what Descartes styles a 'probable' fashion, in what way will Descartes and his followers be impressed? How can Kant's conclusions possess critical force if they are drawn in the context of what counts for Cartesians as an inadequate mode of cognition?

The problem can be illustrated with great poignancy by underscoring a feature of Kant's presentation in the chief critical work. In the Introduction to the *Critique* Kant states that 'there are two stems of human knowledge, namely, *sensibility* and *understanding*' (A15/B29). Similarly, in the opening paragraphs of the Transcendental Aesthetic, he asserts: 'Objects are *given* to us by means of sensibility, and it alone yields us *intuitions*; they are *thought*

through the understanding, and from the understanding arise *concepts*' (A19/B33). The first sentence of the Transcendental Logic informs us: 'Our knowledge springs from two fundamental sources of the mind; the first is the capacity of receiving representations (receptivity for impressions), the second is the power of knowing an object through these representations (spontaneity [in the production] of concepts)' (A50/B74). And the claim reappears at the beginning of the Analytic of Concepts — A67/B92.

Isn't Kant in effect according to the duality of sensibility and understanding the status of a cognition-theoretic axiom? If so, he would not have had to possess prophetic powers to anticipate that his *magnum opus* would meet with a very chilly reception by those whose views it is expressly designed to counteract. Even if Kant's special results about space, time, causality, substance, etc., flow from the duality by the most inexorable logic, his opponents, who deny that sense-based contact with reality, as Kant delineates it, is basic, would be left cold.

The casual reader, aware of the historical *Sturm und Drang*, is sure to feel that Kant's procedure needs some explaining. May we not anticipate that a self-conscious commentator will leap to the task? Curiously, the commentators are for the most part silent, apparently seeing no cause for active concern. Since we may assume that this silence is not a sign of wilful complacency, it is natural to seek out assumptions capable of explaining the omission. But while the following assumption might be thought to do the trick, it serves to account for why (some of) the commentators proceed as they do only by casting a grave suspicion on the historical merit of their discussion.

A commentator who omits to address the difficulty might do so, most likely unwittingly, because he himself regards the Kantian duality as fundamental to or axiomatic in any investigation of cognition deserving the name. Strawson declares categorically: 'The duality of intuitions and concepts is...one form or aspect of a duality which must be recognised in any philosophy which is seriously concerned with human knowledge'.¹ It is therefore entirely natural

1. *The Bounds of Sense* (London: Methuen, 1966), p. 47. Next two quotations: *ibid.*,

for him to claim that the duality functions in Kant's hand as 'an unquestionable datum' — 'a standard-setting definition of what is to count as "experience"'. A similar personal doctrinal commitment shines from Bennett's approval of Kant's theory of the radical diversity of the two sources of knowledge as 'the most important strategic move Kant made in his philosophical development'.² Because Strawson and Bennett both disclaim an overriding concern for the historical realities — Bennett, adding cheek to candour, describes himself as 'one of those commentators who are more interested in what Kant ought to have thought than in what he actually did think' — they are not I suppose to be excoriated for permitting independent analytic goals from taking precedence over interpretational fidelity. But such an extenuation does nothing to show that the problem is itself contrived. However the case may be with Kant's latter-day disciples who operate *within* Kantian metaphilosophical confines, surely Kant himself would have been acutely aware that the so-called 'definition', far from being 'unquestionable', is questioned and questioned again by his near contemporaries.

A different version of this insensitivity leaves its imprint on the discussions of commentators like W.H. Walsh and L.W. Beck, whose commitments to 'what Kant actually did think' are appreciably greater. Walsh writes that Kant 'does intend us to take the proposition that ours is a discursive intelligence as a contingent empirical proposition',³ and Beck describes the proposition as 'factual but not empirical'.⁴ Such descriptions of the 'datum' underline the reality of the problem sketched. Wouldn't the man who troubled to write a *Prolegomena* to render his thinking accessible have been concerned by the considerable disproportion between the epochal consequences he claims for his transcendental philosophy, and the fact that these are predicated on 'empirical' or 'contingent' premises?

p. 25; *ibid.*, *ibid.*

2. *Kant's Dialectic*, p. 16. Next quotation: *ibid.*, viii.

3. *Kant's Criticism of Metaphysics* (Edinburgh University Press, 1975), p. 253.

4. *Essays on Kant and Hume* (New Haven and London: Yale University Press, 1978), p. 25.

As if to answer the question, Beck tells us that Kant proceeds in the *Critique* by performing a 'regression upon the conditions of knowledge from judgements which Hume never thought of doubting and which hence stand in no polemical need for proof.'⁵ But even if we suppose with Beck that Hume would accept Kant's account of judgemental knowledge, how would this compel him to concede Kant's results (thereby betraying his own position) given that for him knowledge of this kind is not knowledge in its basic sense? And, as will surely be agreed, the pointedness of the question sharpens markedly when a figure like Descartes is substituted for Hume, since Descartes, by contrast with Hume, devotes considerable space to describing and criticising the type of cognition on which Kant reflects.

Common to these various approaches to Kant's 'critical' procedure is a concern to justify what is seen as Kant's *assumption* of the sensibility/understanding duality as a cognition-theoretic constant. For the first two commentators Kant's justification is taken to consist in the fact that he is justified — justified, that is, without need of argument. For the second pair, it consists in the fact that the assumption is by common consent exceedingly basic, about as basic as an assumption can be. But Kant's justification for proceeding as he does in the *Critique* does not consist, question-beggingly from the point of view of those implicitly under attack, in his taking the duality as unquestionable, nor does he rely on raw intuitions about its basic status. He is entitled to proceed as he does because a conception of cognition similar to his own appears already in the pre-Kantian writings. The resulting case is very nearly the reverse of Beck's widely approved description, viz. that Kant sets out in 1780 armed with the results of an elicitation of the (implicit and only dimly recognised) assumptions of pre-Kantian accounts of cognition.⁶ Not so: Kant sets

5. *Essays on Kant and Hume*, p. 23.

6. The familiar slogan here is that Hume's necessary conditions for knowledge are, as Hume fails to see, conditions sufficient for Kant's results. See Beck, *Essays on Kant and Hume*, p. 24; Strawson, *The Bounds of Sense*, p. 19; Bennett, *Kant's Dialectic*, pp. 9 ff. I have dealt only cursorily with Hume. But so far as Descartes is concerned, it is

out with the (implicit and only dimly recognised) assumptions of pre-Kantian accounts of what adequate cognition is not, and cannot be. By deepening and widening the negative descriptions of experience which can be located independently in the pre-Kantian works (e.g. in Descartes' criticism of sense-based cognition), Kant occupies the opposing citadel — establishing thereby, or attempting at any rate to establish, that when all is said and done what his predecessors find fault with is the most that can be had.

My present point is not, however, about Kant's denial that his predecessors' goals can be reached, though something will obviously have to be said about this too. The point, rather, is that only by recognising that the form of Kantian 'critique' is dialectically in step with pre-Kantian writings can its character and results, in the pre-Dialectic portions of the *Critique*, be understood. Just above, I stated that Kant sets out in the *Critique* armed with the assumptions of pre-Kantian treatments of inadequate cognition. Recur here to Strawson's claim: 'The duality of intuitions and concepts...must be recognised in any philosophy which is seriously concerned with human knowledge'. Strawson understands this 'must' as a very deep analytic necessity. How, on such an understanding, could Kant reach the result that the 'form of intuition' is *subjective*? Strawson lacks even a bad answer to the question. But isn't the answer obvious? The ideational conception of cognition is a conception on which the objects cognised — ideata — are of a specific kind ('perfect objects', 'substances'). Because this view is represented historically as a view of what the world 'really' contains, it follows that any view of the world as comprising objects of some other kind — non-ideata — must be characterised, for dialectical reasons, as a view of the world otherwise than as it 'really' is. And surely, given such a deviation, which, dialectically considered, is in the clear nature of a 'distortion' or 'blurring', the subject must be at fault.

easy to appreciate that this is far from the truth. Perhaps Kant's conditions are sufficient for knowledge, as Kant regards 'knowledge'. But none of them is necessary for what Descartes regards as knowledge, i.e. 'certain knowledge'.

Some readers may feel that the puzzle about Kant's critical procedure can be disposed of altogether more simply. The fact is — they will maintain — that, from Kant's point of view, entitlement to the duality of sensibility and understanding and to all it entails is established, *inter alia*, by the *criticism* mounted in the Dialectic.

Whatever truth there may be in the suggestion, it cannot, for the following reason, be more than a small part of the whole truth of the matter. In the Dialectic Kant *models* the claims of his predecessors — claims about the extent and ultimate constitution of the physical universe, claims about the self and about God — *in his own terms*. For example, it is very much within the confines of a sense-based view of things that Kant unfolds the Antinomies. But — by analogy — will an architect scrap his plans for a complex structure once the structure is shown to resist execution in tooth-picks? So if the claimed infinity of the universe cannot be established relative to a sense-based view of things, how would those who assert this infinity be impressed, given that they deny to the senses a basic role in cognition? Their immediate reaction would obviously be a self-congratulatory 'I told you so'. In short, Kant's discussion in the Dialectic is predicated on the acceptance of his descriptions of cognitive structure in the preceding portions of the *Critique*. Consequently, the support offered by the Dialectic for these descriptions can be marginal at best. Were Kant to claim more, he could be flailed for perpetrating one extended *ignoratio elenchi*; for denying the disputed doctrines only by changing the subject.

The question stands intact: on what grounds can Kant be regarded — on what grounds does he regard himself — as having specified the uniquely available cognitive mechanisms in the opening parts of the *Critique*? The correct answer is implicit in the foregoing chapters. Kant's positive discussion of cognition reduplicates, though in the process Kant far outdistances by forcing consistency onto, the contents of an account of sense-based cognition like Descartes'. Many of the details of Kant's descriptions are novel; but in their broad outlines the descriptions are nothing new. It is by drawing out the implications of these descriptions that Kant does enough to show (to his own satisfaction at least: that is basically what concerns me now)

that the *terminus ad quem* desired by his predecessors exceeds their grasp.

My slogan, that Descartes' account of mundane cognition is a proto-critique, comes into its own here. Critique is the method of reflexive examination of the subject-object cognitive nexus. It is, in a very useful term, a *transverse* enquiry into cognition: an examination of the cognising subject and the object of cognition *in mutual relation*. The chief point is therefore as follows. The very form of Descartes' treatment of everyday experience is determined by the belief that he knows what the world — the object-pole of the cognitive nexus — 'really' contains. Thus, everyday cognitive commerce is styled 'non-ideational': 'unclear' and 'indistinct'. Never mind that the belief is dogmatic. The important fact is that relative to the belief Descartes is already in a position to decide which features of the cognitive relation subserve the requirements of science, viz. those which conduce to an accurate representation of the occupants of the object-pole, and which features lead away from accuracy. Kant's critical examination in the pre-Dialectic portions of the *Critique* takes up directly from this; its character would otherwise be totally incomprehensible. Note, for instance, how at the start of the second edition Transcendental Deduction Kant states without the slightest argument that 'we cannot represent to ourselves anything as combined in the object which we have not ourselves previously combined, and that of all representations *combination* is the only one which cannot be given through objects. Being an act of the self-activity of the subject, it cannot be executed save by the subject itself' (B130). How could a transverse examination of the subject-object nexus conceivably *suffice* for this decision, that all combination has its source in the subject-pole? Plainly, there is no way in which it could suffice. But Kant's transverse examination is itself conducted relative to an implicit conception of what 'really' belongs to the object-pole. Relative to this conception the mentioned source of incomprehension vanishes. Quite simply, Kant's claim is that combination of the type to which he refers doesn't obtain between the constituents of the object-pole, as these constituents are described by a philosopher like Descartes. Similar remarks apply to Kant's delineation of the

'material' and 'formal' components of a cognised object in the Transcendental Aesthetic and to his assignment of the latter to the subject-pole. The transverse method couldn't by itself justify either the delineation or the assignment; but the method isn't what bears the justificatory burden.

The opening puzzle can now be resolved properly. It is true that neither in the pre-Dialectic portions of the *Critique* nor in the Dialectic does Kant establish that Cartesian attempts to go beyond sense-involving experience fail. What he does show, specifically in the Dialectic, is that an immanent route cannot lead from Cartesian probabilities to the land of Cartesian certainty. This counts as an effective rebuke because Descartes' own treatment of sense-based cognition, if its results are to have the critical implications he himself perceives in them, requires the non-autonomy of that type of cognition.

6. *Discursivity and appearance*

I dealt sketchily above with the spatial side of the thesis of the Transcendental Aesthetic — that space is a (subjective) form of intuition — and illustrated how, in its rough lines, it is prefigured by Descartes' structural analysis of sense-experience. This relation between positive Kantian and negative pre-Kantian views concerning experience and the world isn't coincidental. The character of Kantian critique is itself determined by pre-Kantian views (to which views Kant is therefore reacting dialectically) about what the subject-pole and the object-pole of the cognitive nexus 'really' contain, and thus about the deviations from adequacy built into our standard patterns of thought and speech. It is to be expected, then, that light will also be shed from a Cartesian quarter on the complementary and equally central Kantian thesis that human cognitive commerce is discursive or conceptual in its intellectual aspect, and that as a consequence the human subject represents the world 'as it appears', not 'as it (really) is'.

To any theorist for whom it is second nature that philosophical

enquiry and conceptual or linguistic analysis are one, the immediate reaction to the thesis can only be incomprehension, likely quickening into revulsion. But the case here is similar to the case with the connection between spatiality and subjectivity, which offers equal resistance to immediate comprehension. Via the exertions of the preceding chapters it was established that for a consistent exponent of Cartesian ideology linguistic modes of representation cannot reduplicate the content of an adequate cogniser's consciousness. Obviously, this prefigures Kant's yoking of discursivity and appearance.

To minimise repetition, let me begin by amplifying on the Kantian thesis in the spirit of earlier sections. This will reconfirm that semantic or conceptual links which seem to count as second nature to the historical principals, but which strike the modern reader as counterintuitive, even bizarre, are carried by the words themselves.

The key is Kant's word 'discursive'. This, of course, is cognate with 'discourse'. And so, in stating that the discursive cogniser, qua employing discursive instruments of representation, is incapable of doing right by the world's 'real' character, Kant is stating the inadequacy of that mode of cognitive commerce which receives its proper expression in language (sc. language as we know it). On reflection, it will be noted that the word 'discursive' itself at times bears pejorative connotations even for us. Its link with 'cursory' (from Latin '*currere*', to run) is a signal. A 'cursory' treatment of a subject is a hasty, a rushed, a superficial, treatment thereof. And the word books⁷ tell us, consistently with the etymological fact, that 'discursive' means, among other things, 'rambling', 'digressive', 'chatty', 'not intuitive', 'circuitous', 'devious'. Quite unflattering epithets, are these not?

To judge by this piece of evidence, neither is there cardinal cause for astonishment at Kant's wedding of discursivity and subjectivity, nor should surprise automatically be felt that Kant selects a word with negative associations to label the view he himself champions.

7. My sources are *Webster's Third International Dictionary*, *The Random House Dictionary of the English Language*, *Roget's International Thesaurus*.

Because, once again, Kant is colonising the negative portions of his predecessors' accounts, it is therefore only natural that he should retain their negative language: the approbatory vocabulary, comprising 'adequate', 'reality', 'objectivity', and so on, has been appropriated by them to describe the view they advocate. Recall here that Kant's term '*Anschauung*', rendered by parts as 'out-sight', contrasts unfavourably on the verbal level with an 'in-sightful' mode of object-cognition. In a precisely parallel way, discursive instruments of representation contrast with ideational instruments. It is easily seen that all the points made above concerning Cartesian terms like 'unclear', 'indistinct', 'vulgar', 'perverse', etc., transpose smoothly to the listed associates of 'discursive'. If, to take a pair of examples, a description of an object is devious, if a topic is discussed circuitously, it isn't the object itself that is devious, or the topic circuitous, only the description and the discussion (and, ultimately, the describer and discussor). Obviously, an historically sensitive reader should *expect* Kant to describe the discursivity of human cognitive activity as attesting to a deviation from adequacy.

Repeatedly, Kant represents the discursivity of human intellectual process and the sense-based character of human contact with objects as two sides of the same coin. Can't we already discern in the various synonyms of 'discursive' a reference to the negative descriptions of sense-perception which pepper the pre-Kantian texts? Two words used by Spinoza are particularly resonant here: 'vagrant', applied to the testimony of the senses; and 'superficial', applied to imagination-involving representation. Kant's very term 'discursive' makes visible his dialectical accommodation of the implied criticisms. The senses are despised by pre-Kantians for supplying no more than an 'external', a 'non-profound' or 'superficial', portrayal of objects. By his very nature the sense-perceiver is a 'vagrant' because the evidence his organs of sense vouchsafe, and on which he relies in constructing a picture of the world he inhabits, is essentially the result of his 'circling about' the objects which he seeks to understand, rather than 'delving into' them. By his very nature, the sense-perceiver is a 'vagrant' in the world — one who 'rambles about' the object, who 'per-ambulates', in his efforts to 'comprehend' it; his data are determined, *inter alia* but

essentially, by his own attitude and movements: they are object-representations-for-the-subject, not object-representations *simpliciter*.

What are discursive instruments of representation? 'The knowledge yielded by...the human understanding, must...be by means of concepts, and so is not intuitive, but discursive' (A68/B93). But though there is a word-borne link between discursivity and inadequacy, there does not seem to be such a connection between inadequacy and conceptuality. By examining some of Kant's remarks about concepts, we will see, however, this time on a thematic plane, that the connection is preserved.

In the course of the discussion of the contrast between ideational and non-ideational instruments of representation, it was established that the latter are representatively incomplete or partial, not merely inherently so. Accordingly, non-ideata were identified as items of a specific kind, which I dubbed 'aspectual'. Kant's comments about concepts confirm that these instruments of representation are non-ideational in the Cartesian sense.

A very useful passage in the *Logic* finds Kant contrasting concepts and intuitions (in *his* sense of 'intuition', with its connotations of passive receptivity) as follows. 'Since only single things or individuals are of an all-sided determination, there can be cognitions of an all-sided determination only as intuitions, not, however, as concepts; in respect of the latter, logical determination can never be considered as complete' (/105). Concepts, it is implied, answer to the description 'intrinsically sided determinations'. What, exactly, does this curious phrase purport?

Its purport, as well as the significance of the way Kant divides the labour between concepts and intuitions here, will emerge if we recur to the notion of a Gassendian universal. Any such universal expresses an 'abstracted similitude'. Genetically viewed, each such universal is the product of an act of abstraction over a similarity-in-some-respect recognised to obtain between a number of sense-encountered particulars. (See Descartes' own genetic description at *Principles* 1.59.) Such universals are constitutionally bound up, then, with the 'R = V(o)' schema. It is in this sense that they deserve to be called 'intrinsically sided determinations': they supply representations of an

object — determinations of its character — only ‘from the side’, rather than ‘from within’. In consequence, they can also aptly be characterised as ‘aspectual determinations’.

Kant states in the quoted lines that there cannot be cognitions of an individual or particular in conceptual terms alone: an object’s character will not be specified exhaustively by piling on conceptual determinations. The fact is of great moment, indicating as it does that, for Kant, the ‘completeness’ of cognised accusatives *transcends* intellectual instruments of human representation. Alternatively: objects can only be specified in their completeness by the human subject referentially, qua satisfiers of the contents expressed by concepts. The human cogniser cannot achieve in thought alone a representation which exhausts his object’s reality.

I am not entirely happy with the details of Kant’s contrast. The idea of a complete object seems to be under the control of heterogeneous forces which do not mesh. On the one hand, the description of an object as an ‘all-sided determination’ is adjusted to the positive Kantian view of a human commerce with an object as being ‘from the outside’. On the other hand, the denial that an object can be represented completely in conceptual terms seems to be adjusted to the pre-Kantian view that objects have an ‘internal’ character which eludes the senses. Of the two descriptions, only the second is dialectical: ‘The absolutely inward [nature] of matter, as it would have to be conceived by the pure understanding, is nothing but a phantom’ (A277/B333). This hybridisation of dialectical with non-dialectical factors occasions doubts about the outcome — doubts which point in a phenomenalist direction. Since independent assessment of Kant’s position lies beyond my present purview, I shan’t pursue the issue. Still, even in their present form the remarks enable us to confirm the proto-criticality of Descartes’ treatment of discursive cognition.

Descartes’ account of Gassendian universals — of, in effect, the associated battery of particular-classifying Aristotelian intensions — is dismissive. But the dismissal takes a quite specific, and in the end question-begging, form. Descartes describes these universals from the putatively achieved standpoint of an ideational mode of object-

cognition. Thus, while he really ought to have restricted himself to saying, Descartes doesn't properly restrict himself to saying, that Gassendian universals are framed by abstraction-over-a-recognised-similarity between sense-perceptually encountered objects; he says that 'we avail ourselves of one and the same idea in order to think of all individual things which have a certain similitude' (*Principles* 1.59/242-3). The 'idea' mentioned is for Descartes an idea in the official sense, and so belongs to table 6. Accordingly, Gassendian universals are condescendingly represented as useful but dispensable instruments. (We found the same line of thought in Berkeley. While, as pointed out at V.4, Berkeley acknowledges, in a dangerous-seeming fashion, that one can think of objects abstractively, he remains calm in face of the apparent threat to his wider position from the admission only because he believes that a properly ideational style of cognition underlies this improper, abstractive, style.) So the case is genuinely parallel to the case of Descartes' negative descriptions of sense-experience: Descartes' characterisations are cast negatively directly as a consequence of his additional assumption that he knows what a proper kind of cognitive contact between subject and object involves. And just as Kant takes over the descriptive part of Descartes' analysis of sense-perception without commitment to the additions which make for Descartes' negativity, so he recycles Descartes' account of Gassendian universality while declining the ideational supplement essential for the *critical* implications Descartes sees to pass.

The proto-criticality of Descartes' presentation is confirmed. Kant's positive descriptions coincide with Descartes' negative ones because they are achieved along much the same route. Once we grant Descartes his assumption, we must allow that he is equipped to determine, for any feature of cognition, whether it belongs to the subject-pole alone, or whether it reflects the nature of the occupants of the object-pole. Turning to Kant's analysis, a pair of facts will verify that Cartesian decisions are adopted.

First, we can see from Descartes' genetic account of Gassendian universality that the form of such universals is subjective in origin. These universals are general in a fashion that metaphysically basic

Cartesian (particular-determining) universals couldn't be. Second, because each Gassendian universal, qua abstracted similitude of particulars, expresses no more than a partial object-determination, it is ineluctably abstract. Each of these features is partly definitive of Kantian concepts. Here is the first. 'In every concept there is to be distinguished *matter* and *form*. The matter of concepts is the *object* [sc. the content]; their form is *generality*' (*Logic*/96). What of this form? 'The form of a concept, as of a discursive presentation, is always made' (*ibid.*/99). And the second: 'every concept is an abstract concept' (*ibid.*/105).

Descartes would have been only too happy to agree with these claims. After all, they are his own, compacted within the description of Gassendian universals as '*simply modes of thought*' (*Principles* 1.58/242). His rejection of concepts as inadequate instruments of representation would follow straightaway. But though Kant is appropriating Cartesian points, the situation has altered beyond Cartesian redemption because Descartes' positive supplement is denied; there is nothing now by reference to which the mentioned rejection makes sense. And so, for Kant, the line between abstractness and concreteness is relocated. Concreteness is placed beyond the range of human thought (which, N.B., isn't to say 'beyond the range of human experience': Kantian intuitions are part of experience). In other words, the particularity of constituents of the world cannot be absorbed into the human intellect.

Those with a keen *Sprachsgefühl* could find themselves putting the following words into Kant's mouth: human cognisers are essentially alienated from the world; they aren't on a footing of complete intellectual familiarity with — aren't, intellectually speaking, completely at home in — the world they seek to comprehend; they are, as it were, vagrants. But, of course, there is another side to the coin for Kant — the dominant one as it happens. From this very alienation, which is principled, flows a new and inalienable human freedom. A subject who judges himself by a divine yardstick must regret his failure to measure up, and see his shortfall in a tragic light. But once the chosen standard of comparison has been rejected the

way is open to exult in the so-called shortfall for what it is rather than bewail it for what it isn't.

If we ponder the preceding facts, I believe we can locate the root source of failure of Cartesian philosophy in a dialectically sharp manner. Descartes' own proto-critical account of a sense-based and intellectually discursive style of cognition recognises the V-parameter. The 'made' character of the intensional resources employed by the sense-perceptual cogniser in describing the world is a function of the kind of selectivity which the V-parameter makes possible (and the parameter, by a happy accident of formulation, can also be called 'the vagrancy parameter'). According to Descartes, as I indicated, the user of Gassendian universals would have to be assessed ontologically as non-dual. But how does the parameter come to be there in the first place? From the standpoint of achieved Cartesian science — the standpoint of truth for Descartes — its presence is totally enigmatic. A flowery way of expressing its incomprehensibility would be by saying that God, Descartes' paradigm cogniser, could not understand or operate with Gassendian universals. As Spinoza puts it, 'God does not know things through abstraction, or form general definitions' (Letter to Blyenbergh of 5 January 1665/333). But even according to Descartes Gassendian universals make quite good sense from the human vantage point. So the fact is that, *pace* Descartes, it is improper to represent the human cogniser as less than God, and to leave it at that. In some respects at least, the human cogniser is more than God. This means that the conception of cognition involving the V-parameter is *autonomous* of the V-free conception. Once it is added — something Kant assumes throughout the Dialectic — that the only way to make sense of the latter is by extrapolation from the former, the conclusion follows that the Cartesian project has been comprehensively superseded.

7. *Kantian ontology and appearances*

A major thesis defended in these pages is that Descartes' criticism of experience and knowledge as we know it — of the probable — isn't immanently justified. If at all, it is justified only relative to a view of the world — a certain view — transcendent of our mundane patterns of cognition. The thesis was formulated in several interrelated ways. Epistemologically: the faculties instrumental in probable cognition — sense, memory, imagination — aren't instruments of certain cognition — pure understanding, intuition. Semantically: the probable representative link involves different thought-world connections — reference, particular-classifying (Aristotelian) universals — than the certain representative link — particular-determining (Platonic) universals. Ontologically: the probable cogniser's world comprises objects — aspectual objects — disjoint from those recognised by the Cartesian scientist — substances and their mereological components.

Kant's position is a development of the negative side of Descartes' overall theory. It is therefore to be expected that the ontological project as conceived by one who, like Kant, takes language to be a proper instrument of world-representation, will differ in principle from ontology as conceived by the anti-discursivist ideationist. I now propose to explain, in a fashion which will resonate in the contemporary, analytic, context of discussion, why a Cartesian ontologist would indeed dismiss his Kantian namesake as pseudo-ontologist: a betrayer of reality for its defect. To this end I shall enlist the aid of Wittgenstein's *Tractatus Logico-Philosophicus*. Because Wittgenstein is commonly regarded as firing an opening salvo in the linguistic revolution, whose contemporary foot-soldiers range themselves under the banner of linguistic analysis and whose conception of ontology (Quine looming large here) is adjusted to language, this will at first sight seem an improbable direction in which to look for enlightenment on the contrast. However, Wittgenstein's stress on language notwithstanding, his pre-Kantian

affinities are the ones that predominate.⁸ So the explanation gains considerably in sharpness, and will therefore, or so I believe, speak to analysts, as a direct consequence of the fact that Wittgenstein misrepresents himself as an ontologist relative to linguistic representation as we know it. This, it emerges on balance, and for roughly the same reasons, is as far a cry from the truth as would be the claim, coming from a Cartesian, that the content of a 'clear and distinct' representation of reality reveals what is implicitly there in an 'unclear and indistinct' fashion in our standard patterns of thought and talk.

For an ideationist like Descartes, the basic accusatives of cognition are substances. Wittgenstein's ontological concurrence is expressed in the following passage.

If the world had no substance, then whether a proposition had sense would depend on whether another proposition was true (2.0211).

Wittgenstein adds by way of amplification that if, *per impossibile*, the world had no substance,

we could not sketch out any picture of the world (true or false) (2.0212).

So, by performing a regression on the conditions which have to be met in order for the factual claims we make to be truth-evaluable, Wittgenstein concludes that the world factually represented must consist of substantial entities.

Relative then to the reasonable-sounding requirement that the factual claims we make be truth-evaluable, Wittgenstein draws the inference that the instruments of factual representation must have a specific semantic character.

The requirement that simple signs be possible is the requirement that sense be determinate (3.23).

Let me summarise the demonstrative thrust here in an orderly way. (1) For a factual claim to be evaluable either as true or as false, i.e. for it to be a well-constituted factual claim, it has to have a

8. A detailed defense of this non-standard account of Tractarian antecedents is supplied in my 'Tractatus: Pluralism or Monism?'. The following quotations from the *Tractatus* make use of the translation by D.F. Pears and B.F. McGuinness (London: Routledge and Kegan Paul, 1963).

determinate sense. (2) A factual proposition which has a determinate sense must consist of names, which its complete analysis will therefore reveal. (3) Names designate the basic substantial components of the world. So (4) if there were no such components, it would not be possible for factual claims to have a determinate sense; impossible, consequently, for them to be truth-evaluable. Given that the factual claims we make are evaluable for truth, it follows according to Wittgenstein that the ontology of factual representation is an ontology of substances.

The relevant parallel between Wittgenstein and Descartes is thus as follows. In default of names — of the semantic name-nominatum relation — the world, Wittgenstein holds, would not be factually representable. Similarly, in default of ideas — of the idea-ideatum relation — the cogniser could not, Descartes insists, cognise the world in its ('real') substantial articulation; couldn't 'infer...to the truth of matters outside of us' (Letter to Clerselier concerning *Objections* 5/128). For both, the unavailability of specific instruments of representation — names, ideas — would entail the irrepresentability of the world as it 'truly' is.

There is however a vital disparity between the two positions. Wittgenstein takes the requirement of determinacy to be binding on the factual representer *without qualification*; the requirement is treated, in effect, as a defining condition for any aspirant to be a well-constituted factual representation. '[A]ll the propositions of our everyday language, just as they stand, are in perfect logical order' (5.5563). But Descartes, for his part, recognises a mode of world-representation, viz. the probable mode, which violates official ideational requirements. So while these requirements are definitive of what it is to represent the world adequately, they fall short of defining representation *simpliciter*. '[M]ost men in life perceive nothing but in a confused way' (*Principles* 1.73/251). Admittedly, Descartes' position would collapse into Wittgenstein's if the content of the probable cogniser's mind could be referred immanently to the content of the mind of the certain cogniser. But as it cannot, it does not.

Descartes is right here, not Wittgenstein. Suppose we make a gift

of the phrase 'factual representation' to Wittgenstein. Since the condition of determinacy is definitive of factual representation, as he conceives it, a style of representation which fails to satisfy the condition cannot be called 'factual'. But a minor verbal adjustment suffices to revitalise the criticism. Having given Wittgenstein the phrase, our point becomes, simply, that world-representation as we know it is not factual representation in *his* sense. And, to repeat a familiar figure, the fact that a table is not a chair does not make the former nothing. So ontology as a user of language conceives it diverges radically from ontology as conceived by Wittgenstein, viz. fixing the basic commitments of a factual representer, in his sense of 'factual'.

By what argument does Wittgenstein sustain the requirement of factual determinacy as a requirement on representation as we know it? *Tractatus* 2.0211 contains the answer. For our purposes, the reasoning can be concretised by recurring to a sentence examined above, viz. 'This red is bright'. It is to be agreed that the singular referring expression does not pick out a substantial entity. Relative to this agreement, 2.0211 should contain a reason for denying that the real representative content of what is expressed by uttering the sentence is visible in the latter's surface structure.

Because 'this red' designates a dependency, a non-substance, a truth is asserted only if there is an entity, specifiable by means of a further singular phrase, which is identifiable as the item on which the designatum of the former depends; 'which', as I shall say, 'discharges the dependency of the former'. In acknowledgement of this condition, the original sentence can be expanded (and its 'underlying form' revealed) as follows: 'This red [of...] is bright'. In filling the blank, a second singular phrase will appear, e.g. 'this table', whose designatum discharges the dependency of the designatum of 'this red'.

Suppose now that the singular phrase which fills the blank in turn designates a dependency. The same reasoning would apply to the resulting sentence, which would have in turn to be expanded: 'This red of this table [of...] is bright'. Unless a point is reached where the singular term inserted designates an independency, a substance, the process would continue indefinitely. Under these circumstances the

conditions under which the original sentence has a truth value would be unspecifiable. Since the original sentence is by hypothesis evaluable for truth or falsity (we may suppose that it would be evaluated as true), it follows that the sentence, implicitly at least, contains terms for independencies: 'names', Wittgenstein calls them.

With the argument laid out surgically before us, it is easy to locate its lesion. 'Truth-conditions' is being employed in a very specialised way. As the phrase is understood and used by linguistic philosophers, the conditions for truth of the original sentences could be expressed, without need for expansion, as follows: "'This red is bright' is true if and only if a red colour is picked out and that colour is bright'. But on Wittgenstein's understanding and employment of the phrase, a specification of the truth-conditions of the sentence is a specification of all that must be the case in the world if it is true. Because 'this red' picks out a dependency, and because a dependency is dependent on something else, that additional something therefore has to be introduced at some point, however distant. But — and this is the effective critical wedge — the 'must' here, even if it is a 'must' of logic, isn't a 'must' having anything to do with the well-formedness of the sentence from the vantage point of linguistic representation as we conceive it. If this is not immediately clear, it should be made clear by noting that in default of expansion Wittgenstein, by parity of reasoning, has to evaluate the sentence 'This table is red' (and, indeed, every sentence of ordinary language) as factually indeterminate. If a table is specified, then surely the table specified must either be a wooden table, or a metal table, or a plastic table, etc. Surely, nothing can be a table without being either wood, or metal, or plastic, etc. Similarly, the table's surface has to be either round, or square, or hexagonal. Obviously, however, none of these facts places any obligation on the factual representer as we conceive him.

The genuine affinity between Wittgenstein and Descartes is now apparent. 'Factual representation' in Wittgenstein's understanding shares the feature of 'completeness' so central to Cartesian ideational representation. As for our sample sentence, the parallel between the thinkers works out as follows.

Corresponding to the Wittgenstein contention that 'This red is

bright' cannot be allowed to pass, without expansion, as a sentence whose utterance results in the making of a genuine factual claim, we have the Cartesian contention that no mode can be ideated save as the mode of such-and-such a substance. Presented with the sentence, Descartes would accordingly say that inasmuch as its subject phrase designates a non-substance, it falls short of duplicating the representative content of the consciousness of the ideational cogniser who might utter it. As we saw, Descartes admits that a mode can be *apprehended* independently of the substance which discharges its dependency. So the sentence would count for him as perfectly acceptable as it stands, providing it is clear that the approval takes place in the frame of a non-ideational or apprehensive, not of an ideational or comprehensive, style of cognition. (For the benefit of the analytic reader who regards the sentence as factually ill-formed, I should add that his reason will not be Wittgenstein's, but will consist in the belief that 'red' lacks sufficient individuating content to operate singularly in a well-defined way. This has nothing to do with whether colours are self-subsistent or not.) To be sure, the sentence doesn't count as a proper ideational vehicle of representation. But no criticism is contained in the (definitional) truth of this denial. It is not, we see, a failing of the sentence that it falls short in principle of being in Descartes' sense an ideational representation, and in Wittgenstein's sense a factual one. Quite simply, it is a different kind of representation.

Why would a Cartesian ontologist scoff at his Kantian counterpart? In the Kantian frame ontological enquiry is conducted relative to what counts for the Cartesian as an apprehensive style of object-cognition, i.e. relative to truth-conditions linguistically understood, and hence relative to modes of description employing particular-classifying universals. But Descartes' ontological investigations, like Wittgenstein's in the *Tractatus*, are predicated on an ideational style of object-cognition; they are relative to truth-conditions in the special sense. These are fundamentally incomparable things, a fact recognised more clearly by Descartes than by Wittgenstein, since Descartes denies that the world-representations of the mundane cogniser are implicitly 'clear and

distinct'. From the vantage point of the Cartesian ontologist, the Kantian flits about on the surface of things, and fails in principle to break through to ontological bedrock.

Kant, as usual, accepts these aspersions, and turns them back against his detractors. Indeed, he says, 'once we have allowed ourselves to assume a self-subsistent reality entirely outside the field of sensibility, appearances can only be viewed as contingent modes' (A566/B594). But though Kant is quite aware of the charge that his predecessors would lay against him, he is also in touch with the deep reasons for their inability to make it stick.

8. *Kant's moral man and dualism*

It is appropriate to end with some remarks about how Kant's conception of knowledge and experience bears on dualism. The most relevant place to look for instruction isn't however the Paralogisms of Pure Reason, where Kant deflates the pretensions of the 'science' called 'rational psychology', to which Cartesian provenance is assigned. In this section of the Dialectic Kant counterposes his own account not to a different one but to what is in his eyes really a non-account. In effect, Kant takes issue here with results about human nature which are in his view extracted from the *cogito*, conceived as establishing the meditator's existence as a certainty. But though Descartes, on a hasty reading, does appear to be extracting an answer to 'What am I?' from the *cogito*, functioning in this way, the appearance is misleading. The two functions of the *cogito* — to establish the meditator's existence and to provide a springboard towards the determinations of his nature — are separable. Descartes' considered conclusions about the essential spirituality of the human subject are in fact routed through an examination of the nature of 'certain' knowledge, not rested paralogistically on a purely formal notion of a subject of experience or consciousness. In form, Descartes' position is then rather like Kant's own: both see a correlation between the nature of the subject and the nature of the kind of knowledge he can achieve. However, because their respective

conceptions of that knowledge differ, so do their respective views of the subject.

Equipped with the result that Kant's analysis of experience appropriates Descartes' treatment of 'probable' knowledge, we can make an educated guess as to what Kant's stand ought to be. Should the anticipation be borne out, retroactive confirmation will accrue to the discussion as a whole.

The chief difference between Kant and Descartes consists in Kant's full recognition of the autonomy of the probable. It follows that because Descartes' dualist thesis is defended by reference to a 'certain' conception of things, Kant should adopt a position which isn't directly competitive. For one philosopher directly to compete with another presupposes agreement on basic categories. Spinoza might thus be advanced as a direct Cartesian competitor. But Kant's categories differ from Descartes'. Obviously, Descartes could agree that if Kant were right about knowledge, human nature couldn't be spiritual in his, Descartes', sense. Without ceasing to be Descartes, he could not however agree that, on the assumption that certain knowledge is possible for the human subject, this subject is not potentially dual. A succinct way of stating the oblique relation between Kant and Descartes would therefore be as follows. Because the terms on both sides of the mind/matter divide are understood by Descartes from the vantage point of the right side of the probable/certain duality, one whose conception of human nature remains entirely on the left side of the latter, as does Kant's conception, couldn't qualify as a direct Cartesian competitor.

Considering the matter from the viewpoint of knowledge (another viewpoint will be taken up briefly below), the chief facts are these. On Kant's conception of knowledge and experience, the representations of the experiencing subject fall under the ' $R = V(o)$ ' schema. Accordingly, if the nature of the experiencing subject is determined relative of the kind of knowledge he can achieve, he will be assessed as non-dual: both actually and potentially. 'Non-dual', I cannot overemphasise, does not here mean 'material'. It means 'having a nature which is neither material in Descartes' sense, nor corporeal in Descartes' sense, nor a union of both'. This can be

expressed in several alternative, though basically equivalent, ways, e.g. by speaking of the V-involving object-directed intensional structures of the Kantian experiencer, or of the subject as standing in an intuitive (in Kant's sense of 'intuitive') — i.e. a referential — relation to the objects he experiences, or of the aspectuality of experienced objects, and so on. These are equivalent because each gives expression to the fact that the subject isn't representing ideationally, 'from the point of view of substance'.

Descartes' conception of knower and known gets its full meaning from a divine paradigm: 'the human mind has in it something that we may call divine' (Rule 4/10). Kant states the same early in his career.

The idea is single, self-sufficient, and eternal. The divinity of our soul is its capacity to form the Idea. The senses give only copies or rather *apparentia*.⁹

At this stage, which precedes the *Dissertation*, Kant continues to employ an idiom of immanent connection when describing the links between ideata and sense-given objects. Though the misleading idiom is still used in the *Dissertation*, the opposed forces whose resolution will eventually lead the sense-based conception to be severed sharply are discernible. Of especial interest is Kant's airing of a version of the 'crucial objection' advanced in III.7.

Speaking disparagingly of his rationalist predecessors, Kant writes:

They fashion for themselves a *local presence* of God and enfold God in the world as though he were comprehended simultaneously in infinite space, intending to compensate for this limitation upon him...by means of a locality conceived as it were *eminently*, that is which is infinite.... [For space a]s for time, after they have not only exempted it from the laws of sensitive cognition but have transferred it beyond the boundaries of the world to the extramundane being itself, as a condition of its existence, they involve themselves in an inextricable labyrinth (27/85).

Kant may at first sight appear to be attacking the very idea of non-local extension, understood by extrapolation from the (human) case of local extension. But this isn't so. Whatever difficulties affect the extrapolatory notion in the epistemological context, it is not a notion which essentially involves 'exempt[ing space] from the laws of sensitive cognition'. Indeed, prior to the quoted passage Kant

9. *Reflexionen* ii. 1243, quoted from N. Kemp-Smith, *A Commentary to Kant's 'Critique of Pure Reason'* (London: Macmillan, 1923), p. 433.

suggests, unsteadily but not disapprovingly, that 'space [properly conceived] can be called PHENOMENAL OMNIPRESENCE' (22. *Scholium*/78-9). His objection here is therefore to the transposition of spatiality to the ideational cogniser conceived as standing in a non-intuitive — an 'active' or 'intellectual' rather than 'passive' — relation to objects. This is precisely the charge that was levelled in section 3 above, that if space is bound up structurally with sense-based cognition as (one of) its 'form(s)', then the transposition makes no more sense (from Kant's perspective on mathematics it in fact makes far less sense) than the transposition of spatiality to the relations between numbers. 'Non-local extension', in the unobjectionable sense, retains its internal links with the V-parameter. After all, this is why the objector of III.7 pressed the complaint that to explain the divine epistemological condition in terms of non-local extension is to make of God a sense-perceiver; a superior sense-perceiver to be sure, but a sense-perceiver for all that. The point here is that the suggested idea of an 'eminent presence' illicitly hybridises the V-involving, inadequate, conception of representation with the V-free, adequate or ideational, conception.

But Kant is himself committed to some cross-breeding in the *Dissertation*, for he retains an independent conception of a V-free mode of cognition, and characterises the content thereof as in some manner 'underpinning' the content of sense-based cognition. Thus, he speaks of the former as the latter's 'cause' (*ibid.*/78). We are acquainted with the reasoning informing this putative need to eke out the content of the V-involving conception. '[P]henomena', Kant writes, 'bear witness to some common principle constituting a universal bond, but they do not expose it to view' (2/52-3). And the consequences for the soul, qua capable of cognising the 'bond', follow as expected: 'the absolute and immediate locality of the soul can be denied and yet a hypothetical and mediate locality assigned to it' (30/92). 'Absolute locality' must be denied; the content of human cognition would otherwise remain phenomenal throughout. But the assignment of 'mediate locality' is equally essential; the facts of phenomenal cognition would otherwise float free of proper metaphysical anchorage.

The tensions which will lead to the supersession of this (visibly Platonic) arrangement are palpable. 'Mediate locality' is assigned only because of the facts of phenomenal cognition. But since the explanatory force of the appeal to an 'underlying bond', which is unavailable on the phenomenal level, is already transcendent, it is a short step to the full recognition of the autonomy of the former conception, and to the full recognition of the implications of its autonomy. Kant asks the fateful question in the oft-cited Letter to Herz of 21 February 1771: 'how [can] a representation which is related to an object...otherwise possibly exist, without being affected by it in some way' (/112-13)? Once the implications are worked out, 'immediate locality' will rise to the status of a basic fact about the human condition.

The result for dualism is as sketched at the outset. If human nature is determined by reflecting transversely on the character of human contact with the world, the human subject must be assessed as non-dual. It is thus in no way surprising to find Kant describing the intellectual instruments of human cognition — concepts — in these terms in the *Critique*. 'Every concept must be regarded as a point which, as the station for an observer, has its own horizon, that is, a variety of things which can be represented, and, as it were, surveyed from that standpoint' (A658/B686). World-representation as we know it is 'horizontal'; it essentially introduces the subject. The links with the V-parameter and with the idea of representative incompleteness should stand out without further elaboration.

In chapter II the Cartesian contrast between 'artistic' and 'scientific' cognition was examined. A mode of cognition is denominated 'artistic' by Descartes if the object is approached under the essential influence of interests, purposes, aims, and so on. If Kant really is dialectically in step with Descartes, we may expect him to say that human cognition is through and through 'artistic' in the Cartesian sense. Say this he does. 'Everything gravitates ultimately toward the *practical*' (*Logic*/94). Our researches may best be executed with no special or particular practical purpose in view. But the form of the research attests to its practicality. '[T]he question at issue is...how far reason can advance by means of speculation that

abstracts from all interests' (A746-7/B774-5). Kant's answer in the *Dialectic* is that if genuine knowledge about the world is the goal it cannot advance at all under these conditions. And so, again, the Kantian assessment of human nature takes place on the left side of the art/science line; or, in the successor terms of Descartes' post-*Rules* writings, on the same side of the probable/certain divide.

Relative to the Cartesian link between rationality and mind, the Kantian position is therefore fully prefigured. The rationality of the seeker for knowledge is in Kant's lights a rationality which isn't adjusted to the requirement of 'certainty' codified in PD. So precisely as for Descartes, the rational subject's nature, in Kant's sense of 'rational', isn't essentially spiritual.

There is another vantage point from which the issue can be discussed. For Descartes, the subject's spirituality follows from his being cognitively active. This too finds expression in Kant; though, as we must expect, in a transposed manner. The human subject is according to Kant ineradicably 'passive' in his knowledge-seeking dealings with the world; but he is morally 'active'. In the moral sphere the idea of divine legislation is brought down to earth: 'in regard to the principles of morality...the experience...is itself made possible only by...ideas' (A318/B375). Precisely here, Kant therefore gives voice to a dualist thesis about human nature.

Something exceedingly strange appears to have occurred. Hasn't Kant effected a complete alteration in the Cartesian arrangements? Having probabilified the scientific, isn't he, by finding a successor to certainty in the moral realm, locating freedom where Descartes saw bondage, and making of man the seeker after knowledge a servant of his passions? The relations, we now know, are somewhat less direct than this suggests, and hence the alteration somewhat less complete. Nevertheless, there is something uncanny about the development, which engenders the thought that in Kant the moral philosopher the various ideological parameters dealt with by Descartes have succeeded in creating an exponent of one of their possible permutations. The implications for the evaluation of Kant's moral theory need to be investigated further, and it can be suggested, with a backwards glance over the historical march of ideas, that if Platonic

backsliding is avoided, an Aristotelianisation of moral philosophy should not be long in coming. But these are matters for the far side of where I leave off.

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